



**Central Asia Regional Risk Assessment:
Responding to Water, Energy, and Food Insecurity**

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I—Overview

Central Asia's poorest countries find themselves particularly vulnerable to water, energy, and food insecurities. Tajikistan experienced a “compound crisis” during the winter of 2008, when exceptionally cold weather caused breakdowns in the country's energy infrastructure, damaged winter crops and reduced livestock herds. Significant increases in water, energy, and food insecurities resulted. These were subsequently exacerbated by higher global food prices and by the onset of drought conditions in the spring and summer, which particularly affected Central Asia's southern and eastern regions, as well as parts of the Ferghana Valley and the Aral Sea Delta. The effects of these problems were magnified by the difficulties the government and humanitarian organisations working in Tajikistan faced in responding to this acute cold-weather emergency, the roots of which were deeply intertwined with Tajikistan's chronic development challenges. These concerns increasingly made themselves felt in the Kyrgyz Republic over the course of 2008, particularly in terms of growing energy and food insecurities.

Representatives of the international community met in July 2008 in Almaty, in order to proactively help Central Asia's governments to better manage these risks, and to alleviate their negative impact on vulnerable regions and social groups. Along with the United Nations' appeals that were launched in Tajikistan and the Kyrgyz Republic during September-October, this assessment report—which was funded by UNDP, DFID, and USAID and benefitted from in-kind support from these organisations as well as from the World Bank, the Water Agency of Japan, the Brookings Institutions' Wolfensohn Centre, and many other partner organisations—represents one of the concrete results of this meeting.¹ It focuses on:

- Assessing the degree and implications of water, energy, and food insecurity in Tajikistan and the Kyrgyz Republic in the winter of 2008-2009; and
- Developing proposals to improve governments' and international organisations' immediate preparedness to respond to these insecurities.

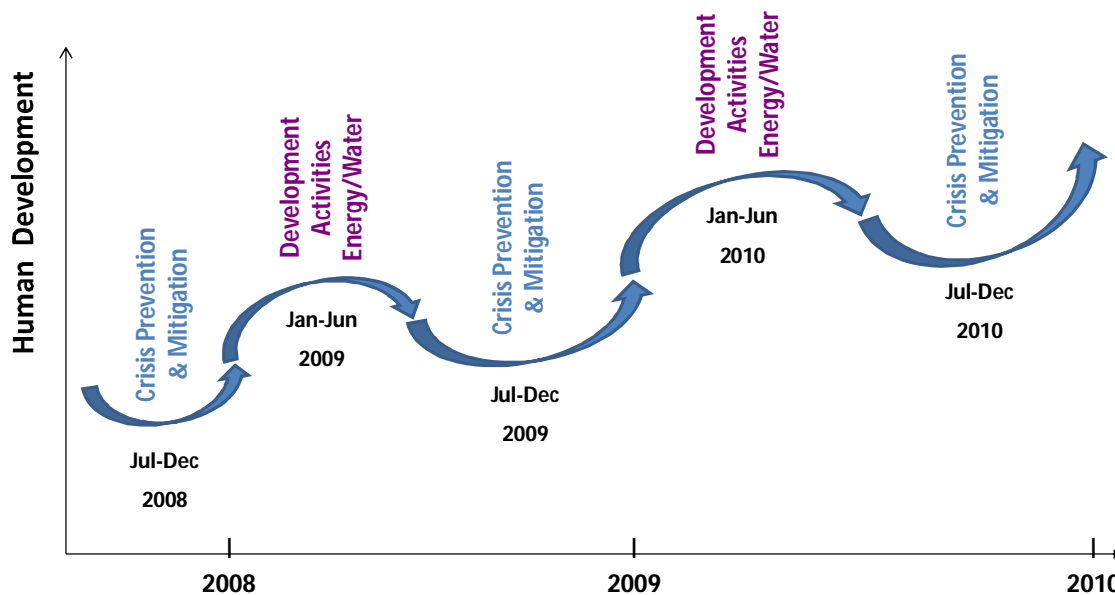
Longer term, reducing water, energy, and food insecurities in Central Asia depends on:

- Prospects for regional cooperation—during the Bishkek CIS Summit meeting in October, Central Asia's five presidents promised a cooperative response to the water and energy tensions facing the region;
- Hydrological and meteorological trends in the region, starting with hopes that the drought of 2008 will become a fleeting memory, and extending to uncertainties concerning the effects of climate change on Central Asia's glaciers;

¹ Much of the work on this report was conducted in Kazakhstan, Kyrgyzstan and Tajikistan by a team of three persons: Luigi De Martino (consultant, associated researcher at the Graduate Institute of International and Development Studies in Geneva); Munisa Vahobova (consultant, UNDP Disaster Management Programme in Dushanbe); and David Gullette (consultant at UNDP Bishkek). The report was finalised under the direction of the senior management of UNDP's Regional Bureau for Europe and CIS. Work on the report received financial support from UNDP, DFID, and USAID; and in-kind support from UNDP, the World Bank, the Water Agency of Japan, the Brookings Institutions' Wolfensohn Centre, and many other organisations. The team would like to thank all persons that have supported the present assessment, in Central Asia, New York, Bratislava, Geneva, and elsewhere.

- Combining political and macroeconomic stability—particularly in light of the global economic crisis (which seems likely to affect remittances in 2009)—on the one hand with the more aggressive pursuit of institutional reform, particularly in the energy, water, and agricultural sectors, and in public administration more generally; and
- The emergence of more effective links between disaster prevention, humanitarian response, early recovery, and longer-term development programming, particularly in terms of better early warning mechanisms and more sophisticated disaster preparedness activities. Closer links between the responses to water, energy, and food insecurities on the one hand, and the design and implementation of national disaster preparedness strategies and other high-level international risk-mitigation initiatives on the other (such as the uranium tailings initiative now being developed in the Kyrgyz Republic), are particularly important in this respect.

Crisis Mitigation and Development – a Medium Term Perspective



The design of new strategic planning and donor coordination frameworks—in the form of the poverty reduction and country development strategies in Tajikistan and the Kyrgyz Republic, respectively, and of the new joint country support strategies and UN development assistance frameworks in these countries—presents governments and the international community with important opportunities to respond to the water, energy, and food security risks facing Central Asia. They also offer opportunities to devise more effective responses to other disaster-related risks—particularly those associated with earthquakes, flooding, landslides, and uranium tailings (and other hazardous wastes). While this document is not intended to serve as an action plan, it is meant as a call to action, and as a framework within which concrete, agency-level actions can be developed. These actions could take place within a planning cycle that is schematically represented in the figure above. When appropriately linked to donor monitoring, these actions could facilitate better management of the links between disaster prevention, humanitarian response, early recovery, and development programming.

II—Executive Summary

Overview

The Central Asia Regional Risk Assessment:

- Examines the risks facing Central Asia associated with the possible deepening and widening of the “compound crisis” phenomena that took hold in Tajikistan during the winter of 2008, in terms of threats to water, energy, and food security;
- Considers some of the issues raised by the response to these insecurities in Tajikistan and the Kyrgyz Republic, by governments and the international community; and
- Suggests some initial conclusions concerning possible improvements in how the United Nations system, and international community more broadly, manages the nexus of development and humanitarian programming, in light of crisis situations with the potential to transform chronic water, energy, and food insecurities into acute emergency situations.

This report does not pretend to assess all the short- and longer-term risks to sustainable development prospects across the entirety of the Central Asian region. The focus is on water, energy, and food insecurities in the Tajikistan and the Kyrgyz Republic. The assessment touches on other issues and other Central Asian countries to the extent that some of the risks discussed here (e.g., those associated with water governance or remittance flows) have cross-border dimensions.

Water, energy, and food insecurity in Central Asia

Central Asia’s exceptionally cold winter of 2007-2008 caused breakdowns in Tajikistan’s energy infrastructure, reducing winter crop yields and livestock herds. According to the National Bank of Tajikistan, winter-related damages reached \$250 million,² some 7% of 2007 GDP. Economic growth slowed, and food and energy security were adversely affected. Despite a history of annual appeals for donor assistance, the response to these developments by the government of Tajikistan, United Nations agencies, and the international community was unable to prevent millions of people from spending weeks without access to heat and electricity in severe winter conditions. These problems were exacerbated by global food and energy price trends, and subsequently by the onset of drought in the spring and summer, across Central Asia. The drought conditions in turn exacerbated the low water levels in the hydropower stations that generate the bulk of the electricity consumed in Tajikistan and the Kyrgyz Republic—where generation capacities had been under great strain by high winter demand for heat and electricity.

Developments during the second half of 2008 have regrettably shown that concerns about the possible repeat and spread of Tajikistan’s compound crisis have not been misplaced. It has instead become clear that:

Water, energy, and food insecurities remain significant in Tajikistan, and have become a serious problem in the Kyrgyz Republic. In particular:

² Source: National Bank of Tajikistan (<http://www.nbt.tj/en/?c=44&id=44&a=134>)

- Water levels in the Toktogul (Kyrgyz Republic) and Nurek (Tajikistan) hydropower stations remained well below historical levels throughout 2008. According to data from the Scientific Information Centre of the Interstate Commission on Water Coordination (ICWC), water volumes at Toktogul and Nurek ended last year some 20% and 9% below historical averages, respectively. These low levels reflect the continuing importance of drought conditions in the Aral Sea basin, which both constrain “upstream” winter electricity production in Tajikistan and the Kyrgyz Republic and raise uncertainties about the availability of irrigated water for agriculture in the “downstream” Central Asian countries (particularly Uzbekistan and Turkmenistan) during the spring and summer of 2009.
- Low water levels in Central Asia’s hydropower stations have socio-economic consequences, depressing electric power generation and industrial production, and reducing household access to heat and electricity. Official data for 2008 show electric power generation dropping by 18.5% in the Kyrgyz Republic during the first eleven months of 2008, and by 8% in Tajikistan for the year as a whole.³ This “electric shock” essentially stopped industrial growth in both countries: in Tajikistan, the volume of industrial production was reported down 2.5% during the first nine months of 2008; while (with the exception of gold output) industrial production stayed flat in the Kyrgyz Republic.⁴ In both countries, electricity users are suffering from planned and unplanned electricity cut-offs. Electricity and water tariffs for households and other users have either risen sharply, or are expected to do so in the next 12-24 months. Despite efforts to reduce and rationalise electricity demand, water volumes at the Toktogul, Nurek, and other hydropower stations were well below normal levels during 2008—trends that are continuing into 2009. The Kyrgyz government has been working to prevent water reserves at Toktogul from dropping to “dead levels” before the winter is over—a scenario that would deprive millions of people of access to heat and electricity. Difficulties in concluding an agreement in the new year between the governments of Uzbekistan and Tajikistan on the transmission of Turkmenistani electricity through Uzbekistan to Tajikistan, which led to the cessation of these transmissions in late January 2009, have heightened “dead level” fears about Nurek as well.
- Water and energy insecurities in 2008 were exacerbated by growing concerns about food security. While both Tajikistan and the Kyrgyz Republic seem to have avoided declines in food production in 2008, prices for foodstuffs (and consumer goods in general) rose sharply last year. In Tajikistan, consumer prices rose by nearly 21%, thanks to a 26% increase in food prices. In the Kyrgyz Republic, consumer prices in 2008 rose 25%, with food prices rising 32%. While physical availability is not an issue generally, rising prices have made food affordability an increasing concern. Food security monitoring conducted by WFP in October-November 2008 found that 1.5 million in Tajikistan were food insecure, while 650,000 were severely food insecure. In the Kyrgyz Republic, the assessment that underpinned the flash appeal developed by the government and the UN country team found that 1 million people were vulnerable to higher food prices. Concerns about the possible continuation of 2008’s drought conditions have led the US Department of Agriculture to forecast 25% declines for the 2009 winter wheat harvest in Tajikistan and Turkmenistan; a 3% decline is forecast for Uzbekistan.

³ Unless specified otherwise, all socio-economic data used in this report are taken from national statistical office web sites.

⁴ The overall volume of industrial output in the Kyrgyz Republic was reported up 15.2% during this time. However, production from the Kumtor gold mine complex (which has its own generators) was responsible for much of this increase. Without Kumtor output, industrial production during January-November 2008 was reported down 1.2%.

Macroeconomic uncertainties: Somewhat surprisingly, GDP growth close to 7% was reported in both countries for the first three quarters of 2008. This seems to have been due largely to continuing inflows of remittances from Russia, which during the first three quarters of 2008 were nearly double year-earlier levels. The industrial slowdown was apparently offset by growth in agriculture (increases in acreage planted seem to have offset declines in yields due to drought conditions and locust infestation), construction (due in part to large investment outlays to construct new hydropower stations) and services. Global food and energy prices have fallen sharply since their mid-2008 peaks; and while these price cuts were not fully passed on to consumers, annual inflation rates in Tajikistan and the Kyrgyz Republic dropped sharply in the second half of the year. Regional cooperation seems to have come back into focus: the Central Asian heads of state used the CIS Summit meeting in Bishkek in October to announce an expanded regional cooperation programme, with a special focus on “hydro-energy support, fuel resources supply, water accumulation in the Toktogul and Nurek reservoirs”. Thanks in part to these efforts, Tajikistan was able to boost electricity imports by some 18% in 2008, limiting the decline in electricity consumption to just 3%.

On the other hand, these trends may not bring immediate relief to hard-pressed Central Asian households. For one thing, Central Asia’s under-developed transport and trade infrastructures can deprive isolated communities of access to foodstuffs, fuels, and other necessities even when central stock piles are full. Moreover, the global economic crisis—with its negative implications for remittances, export revenues, and bank financing from Russia and Kazakhstan, as well as for prices of gold and aluminium exports—casts a long shadow over growth prospects in 2009-2010. Following a September 2008 IMF mission that produced a cautiously positive assessment, worrisome mid-January statements from the National Bank of Tajikistan suggest that Tajikistan’s external position deteriorated sharply in the fourth quarter. IMF missions to Bishkek in July-August and October 2008 produced a more sober assessment of the Kyrgyz Republic’s economic prospects. Both governments are seeking expanded IMF support in 2009, under the Exogenous Shocks Facility (Kyrgyz Republic) and a new Poverty Reduction and Growth Facility (Tajikistan).⁵

Should significant deterioration in Tajikistan’s and the Kyrgyz Republic’s external position combine with drought-induced bad harvests and continuing electricity shortages in 2009, significant socio-economic dislocation would almost inevitably follow. As promising as the October Bishkek regional cooperation agreement may sound, Central Asia’s post-Soviet history is replete with dozens of such (often unimplemented) agreements.

Responses: Governments and the international community

With support from the international community, the governments of Tajikistan and the Kyrgyz Republic have introduced programmes to respond to these threats, with a focus on energy security. In particular:

⁵ The December 2008 IMF report on the Kyrgyz Republic begins by noting that “Several exogenous shocks have hit the Kyrgyz economy that undermine macroeconomic stability, erode the gains made in poverty reduction, and create balance of payments difficulties.” See International Monetary Fund, “Kyrgyz Republic: Request for an 18-Month Arrangement Under the Exogenous Shocks Facility”, IMF Country Report No. 08/381; and “Republic of Tajikistan: First Assessment under the 2008 Staff-Monitored Programme”, IMF Country Report 08/382, December 2008.

- In the Kyrgyz Republic, planned blackouts were introduced in March 2008, lifted in mid-June, and then re-imposed in August, once it became clear that water volumes at Toktogul would not be restored to planned levels by the end of the summer. On 7 October, it was announced that power cuts would be extended to 12 hours per day in most provinces. Only nine hours of electricity per day would be supplied in Batken province; in Bishkek, only 14 hours of electricity per day is guaranteed. Further reductions in energy demand are to result from the closure of schools that use electricity for heating from 25 December through to 1 March 2009 (coal-heating systems are to be installed in new schools). Generation capacity of the Bishkek Heating and Power Plant is to be upgraded via refurbishing; additional fuel has been procured, thanks to a \$5 million World Bank emergency energy assistance grant.
- In rural areas across Tajikistan (except for Gorno Badakhshan), households only have access to electricity (provided by the Barqi Tojik utility) for six hours per day. Access is further reduced for other users (businesses, schools, hospitals) who don't have their own generation systems. This is despite the introduction of an additional 670 megawatts in annual generation capacity from the Sangtuda-1 hydropower plant, elements of which came on line in January, July, and November 2008. In addition to improving food stocks for health facilities, kindergartens, retirement homes and boarding schools, the response in Tajikistan has emphasised the repair of irrigation systems, drainage systems and pumping stations. Contracts for increased imports of gas (from Turkmenistan and Uzbekistan) and electricity (from Turkmenistan, transmitted via Uzbekistan) have been concluded. However, while the power agreement allowed Tajikistan to significantly increase electricity imports in 2008 (they rose by some 39% in the fourth quarter alone), Turkmenistani electricity exports via Uzbekistan stopped in January 2009, due to the failure to conclude an electricity transit agreement with Uzbekistan for the new year. This halt in electricity imports from Turkmenistan exacerbated pressures on water levels at the Nurek hydropower station, and led the authorities in Tajikistan to tighten electricity rationing in late January 2009.
- Longer term, both countries anticipate significant additions to power generation capacity, in the form of power stations running both on hydro and fossil fuels. The expansion of the Sangtuda-1 hydropower plant on the Vakhsh river cascade in 2008, which increased Tajikistan's electric power generation capacity by some 10%, is symbolic of both countries' emphasis on more hydropower generation assets, rather than on encouraging energy efficiency or other forms of renewable energy (e.g., small hydro). A similar orientation is apparent in the Kyrgyz Republic's emphasis on expanding generation capacity via the Kambarata hydropower stations along the Naryn river cascade. But while the energy tensions now affecting Central Asia have increased government willingness to pursue alternative and energy efficiency solutions, questions about the cost-effectiveness of such initiatives have not been fully resolved. Reconciling this increased reliance on fossil fuels with longer-term imperatives of reducing carbon emissions may also prove difficult.

Unfortunately, the energy sector measures that have been introduced have been unable to push the water levels at the Toktogul and Nurek hydropower stations back to historical averages. While energy imports were well above average levels in 2008,⁶ they were not able to offset declines in domestic power generation and consumption. Neither country has yet robustly pursued reforms that have been successfully introduced in many other transition economies, which have both rationalised energy demand and significantly increased energy supply, while shielding low- and

⁶ In addition to the 18% increase in electricity imports reported by Tajikistan in 2008, the volume of the Kyrgyz Republic's imports of coal during the first ten months of the year was reported up 70%.

middle-income households from the worst impact of the higher tariffs that come with progress toward longer-term energy security. There is a risk that energy tensions will force governments in both countries to significantly raise electricity (and water) tariffs, without putting in place the accompanying measures needed to increase energy supplies and improve household access to energy—especially for poor households. Tariff hikes without improvements in access could lead to significant investments in expensive generators for the businesses and households who can afford them—and to more heating with firewood and animal dung for those who can’t—with well known unfortunate deforestation and health consequences.

Three appeals have been launched by the UN system since the onset of the 2008 winter crisis: flash appeals by both Tajikistan (in February 2008) and the Kyrgyz Republic (in December 2008); and the September 2008 food security appeal (in Tajikistan). In both countries these appeals have emphasised food security, reflecting both large numbers of food insecure households and the relatively strong UN humanitarian response capacity in this area (from FAO and WFP). Government actions have played the most important role in the response in the energy sector, with support from the World Bank and other donors, largely outside the UN humanitarian response framework. The developments of 2008 underscore the importance of increasing effectiveness and cooperation within and between the UN humanitarian and other emergency response mechanisms.

Initial conclusions

The above analysis suggests the following conclusions:

- Over the course of 2008 water, energy, and food insecurities remained significant in Tajikistan and intensified in the Kyrgyz Republic. Fortunately, they did not lead to general macroeconomic instability; nor have these tensions spread across Central Asia. Whether these favourable trends continue—particularly in light of the unfolding global economic crisis, and the possible impact of drought conditions on agriculture in 2009—remains to be seen.
- Progress has been made by these countries’ national responses, particularly in terms of augmenting supplies of fossil fuels and increasing electricity imports. However, there are clearly reasons for concern about the response, in light of the declines in electricity production in 2008, as well as of indications that the response measures put in place in Tajikistan have yet to fully “trickle down” to schools, hospitals, and water systems.
- The 2008 winter crisis in Tajikistan pointed to ways in which UN emergency response mechanisms are not ideally suited to deal with the humanitarian dimensions of a compound crisis. Difficulties encountered in integrating the global clusters with national emergency response mechanisms underscored the importance of flexibly applying global processes that were designed for acute humanitarian disasters in tropical climates, rather than chronic, development-based combinations of water, energy, and food insecurity. Surge personnel sent to support humanitarian responses in Central Asia need to be Russian speakers and be able to stay for longer than three-month stints. UN Country Team staff need to be trained in the cluster system, in areas ranging from unloading trains and trucks, managing inventories of humanitarian supplies, drafting appeals, accessing CERF funds, and reporting on the impacts of humanitarian and early recovery activities.

- While short-term programmes are needed to assist the most vulnerable people through the winter, the solutions to the crisis need to come from longer-term development programming. Opportunities for closer alignment of UNDAF, JCSS, CDS/NDS processes need to be more closely examined by governments and donors—particularly in terms of their links between (potential) humanitarian and development activities, in the following areas:
 - The closer alignment of energy and environment programming (as undertaken by the World Bank, Asian Development Bank, European Commission, UNDP, and others) with on-going threats to water and energy security, particularly in terms of more strongly promoting renewable energy production and consumption; and
 - Strengthening the emphasis in long-term rural development programming on increasing rural families' productive assets (e.g., livestock), without denying food or cash support to vulnerable households living in difficult winter conditions.
- Development agencies active in Central Asia should increase their human resources and other capacities to engage in disaster prevention programming, either on a permanent or surge capacity basis. Water and sanitation expertise is particularly lacking in the region. UNDP's decision to create a regional office for Central Asia in Almaty (thereby joining the World Bank, USAID, the European Commission, and other UN agencies) and to outpost staff from its Bureau for Crisis Prevention and Recovery there, should where possible be followed by other organisations. Alternatively, different agencies could second staff to a single coordinating agency in Central Asia, to form a response unit.
- While the most important elements of the response to water, energy, and food insecurities in Central Asia should have a national character, the regional focus represented by the work on this report should be continued, to *inter alia* provide continual monitoring of, and early warning concerning, these risks. Such cross-border dimensions as remittance flows, water levels at power stations of regional significance, and the possible impact of the global economic crisis, are particularly important in this respect.

III—Recommendations

This section is intended to provide a clear framework of action for governments and the international community, in order to help governments respond to compound crisis risks in Central Asia. The recommendations it contains are based on the findings of this assessment, particularly in terms of last winter's threats to water, energy, and food security in Tajikistan. They are intended to be both of an immediate nature—to mitigate possible acute, humanitarian effects of another potentially severe winter in Central Asia—and to provide medium- and longer-term responses to the region's more chronic development problems. Particular emphasis is placed on:

- improving coordination within the UN system and the international community, in order to strengthen government capacity to better respond to water, energy, and food insecurities; and
- identifying the appropriate institutional and programmatic linkages between disaster prevention, humanitarian response, early recovery, and longer term development activities, both within and between governments and the international community.

For ease of reference, these recommendations are grouped in five categories:

- *Information:* The information base required for an early, common understanding of a potential compound crisis situation;
- *Coordination:* Measures to address coordination gaps within the UN system, between the UN system and the multilateral and bilateral institutions active in Central Asia, and between governments and the international community;
- *Operations:* Operational and structural issues that have prevented rapid, effective responses by the international community to the humanitarian threats posed last winter in Tajikistan;
- *Sectoral reforms:* The reforms needed in the energy, agricultural, and other key sectors; and
- *Strategy:* Governments' strategic policy frameworks for sustainable development, disaster prevention, poverty reduction, and donor coordination.

Information: The work started within the framework of this assessment should be continued in the following respects:

- *Early warning:* A number of early warning systems are in use in Central Asia, by both the international community and government agencies.⁷ However, these systems were unable to correctly anticipate the compound crisis facing Tajikistan during the winter of 2008; nor could they effectively link the spectre of these water, energy, and food insecurities to appropriate preventive or early recovery responses. These gaps reflect *inter alia* large differences between the data these systems would ideally track (via indicators) on the one hand, and what is publicly available on the other. Nonetheless, a simple but tractable early

⁷ For more on early warning systems and disaster prevention, see <http://www.unisdr.org/ppew/ppew-index.htm>.

warning system focusing on five variables⁸ has been established by UNDP-Tajikistan, and has been in operation since September 2008. Possibilities for further improving early warning mechanisms in Central Asia should be explored during face-to-face meetings of the institutions and individuals responsible for these mechanisms, as soon as may be arranged. Wherever possible, these systems should be linked to government institutions and policy processes, particularly those pertaining to crisis prevention.

- *Better modelling of the links between Central Asia's long-term hydrological and development prospects.* For example, if (as now seems to be the case) global warming accelerates the melting of Central Asia's glaciers, this could significantly aggravate longer-term water, energy, and food insecurities across the region. It would also have deeply negative implications for the further expansion of Central Asia's hydropower resources—which figure prominently in the development plans of Tajikistan and the Kyrgyz Republic. Research to determine links between periods of high and low rainfall in Central Asia and El Niño/La Niña cycles in the Pacific Ocean⁹ should also be explored.
- *Improvement in the quality and quantity of official socio-economic (and, where appropriate, hydrological) data,* so that key development trends may be appropriately monitored and assessed, and the appropriate early recovery responses designed and implemented. Such improvements could also lay the basis for better reporting by UN agencies to donors concerning project outcomes, as well as codification and dissemination of lessons learned.

Coordination: Here, work should focus on:

- *Improving linkages between government responses to emergencies/disaster situations and the work of the humanitarian community.* In light of the large numbers of natural disasters Tajikistan experiences,¹⁰ the ministerial status of the Committee on Emergency Situations (CoES) should be reinstated; this would bring the government's disaster management framework into line with neighbouring countries'. Reporting lines between various line ministries should ideally be clarified as well. The Commissioner (Minister) should also become a deputy chairman of the Commission for Emergency Situations chaired by the head of government. The joint government-humanitarian community coordination platform (REACT) should likewise be fully endorsed by the authorities in Tajikistan. These measures are critical to improving coordination and cohesion along the disaster prevention → emergency response → early recovery → development programming continuum, in order to better meet the needs of government and the international community.
- *Better adaptation of the cluster system that underpins the UN's emergency response mechanism to compound crisis problems.* While the introduction of the global cluster system in Tajikistan was ultimately successful, some lessons were learned during the course of its implementation. The process of integrating the clusters with the pre-existing REACT processes underscores the importance of flexibly adapting global processes that were designed for acute humanitarian disasters in tropical climates, rather than chronic, development-based combinations of water, energy, and food insecurity. Surge personnel

⁸ These are precipitation, remittances, food prices, electricity generation, and water levels at the Nurek hydropower station. For any questions or suggestions, contact react.dushanbe@undp.org.

⁹ See, for example, http://www.knmi.nl/research/global_climate/enso/effects/; and <http://home.comcast.net/~herbwx/elnino.html>.

¹⁰ According to the 2004-2009 UNDAF, up to 200 natural disasters occur annually in Tajikistan.

sent to support humanitarian responses in Central Asia need to be Russian speakers and be able to stay for longer than three-month stints. UN Country Team staff need to be trained in such areas as unloading trains and trucks, managing inventories of humanitarian supplies, drafting appeals, and reporting on the impacts of humanitarian and early recovery activities. For those areas in which the cluster system can not easily be applied (e.g., energy), appropriate coordination must be found, *inter alia* with the World Bank, in the context of its *Central Asia and Caucasus Disaster Risk Management Programme*.

- *Promote joint programming* wherever possible and desirable, particularly within the UN system (i.e., within the context of the new UNDAFs that are now being or soon will be developed), but also among the donor community more broadly (i.e., within the framework of the new JCSSs that are now being developed). Wherever possible and advisable, the development of common inter-agency targets to address critical areas of longer-term vulnerability in the water, energy, and food security areas, should be pursued. Efforts should likewise be undertaken to ensure closer working relationships with the relevant activities conducted by regional UN bodies, such as the International Strategy for Disaster Reduction in Central Asia.¹¹
- *Strengthen the international community's presence in Tajikistan.* While 15 UN agencies are active in Tajikistan, only five have in-country representations, and only two of these engage extensively in programming in rural areas. Most UN agencies therefore do not have the capacity to fully recognise both the humanitarian and development dimensions of their mandates, or to quickly scale up in the event of a humanitarian crisis. The events of 2008 show that a relatively small UN programme in Tajikistan is unable sustain a multi-month, multi-sectoral disaster response without significant staffing-up. Rapid access to additional funding is needed for the required staffing-up. Outside the UN, the European Commission's December 2008 announcement that it would double its 2009-2010 budget for programming and support in Tajikistan is an example worthy of emulation.
- *Toward a greater emphasis on disaster prevention and early recovery.* In the disaster prevention → humanitarian response → early recovery → development programming continuum, relatively little donor support in Tajikistan and the Kyrgyz Republic has thus far been forthcoming for disaster prevention (e.g., early warning) and early recovery activities—despite the recurrent nature of natural disasters in both countries that require repeated inflows of costly relief assistance. In Tajikistan, effective support for the design and subsequent implementation of the National Disaster Preparedness and Response Plan, and the Risk Management Strategy and Action Plan (which are to be finalised in 2009), could be particularly important in this respect.

Operations: Tajikistan's experience from the winter of 2008 suggests that governments and the international community should focus on *training in the logistical dimensions of humanitarian and early recovery response*, particularly in terms of train and airport off-take, inland transport, commodity tracking and accounting, storage (*inter alia* in Tajikistan's new UN Emergency Reserve), and secondary distribution.

¹¹ See <http://www.unisdr-wana.org/central-asia/centra-asia.html>.

Sectoral reforms:

- *Energy supply: Small is beautiful.* Both Tajikistan and the Kyrgyz Republic view the expansion of hydropower generation capacity—primarily via the construction or expansion of large dams (e.g., Rogun, Kambarata)—as central to their longer-term development prospects. Once completed, these projects would both remove the spectre of domestic energy shortfalls and allow for significant electricity exports. However, in light of their large capital requirements and long gestation periods, these projects will not provide short- or medium-term relief to the energy insecurities that are currently plaguing both countries—assuming they are eventually constructed. Smaller, more labour-intensive projects with lower capital requirements, shorter gestation periods, and greater employment-generation possibilities should therefore be pursued, at least until the larger projects come on line. Micro-hydro, biogas, solar, and other renewable energy technologies, but also energy efficiency projects (particularly in hospitals, schools, and other public buildings), and greater emphasis on maintenance of the existing energy infrastructure—such activities are much more likely to generate positive short- and medium-term results. Closer coordination between the government, and international agencies dealing with large infrastructure projects (e.g., World Bank) and others (e.g., Asian Development Bank, Agha Khan Foundation, UNDP) working on smaller-scale projects, are needed to find the right mix of large hydropower, run-of-river, and micro-hydro projects.
- *Supply side: More robust reforms are needed.* National development strategies in Tajikistan and the Kyrgyz Republic call for the partial liberalisation and privatisation of the energy sector, in order to rationalise energy demand, introduce competition into monopolised markets, and generate the internal and external finance needed to reverse the de-capitalisation of the energy infrastructure. The role of smaller-scale, alternative energy technologies is unlikely to expand significantly if this is left solely to the monopolies that dominate national energy sectors. Legal and institutional frameworks need to be adapted to support networks of smaller, alternative energy producers.
- *Demand side: Tariff rebalancing, meters, and PR.* International experience shows that tariff increases via the introduction of time-of-day pricing and graduated tariffs (whereby large energy consumers pay much more per unit of energy consumed than small users) can increase revenues for energy providers and rationalise energy consumption while ensuring that low-income users are protected from the brunt of the higher tariffs. (The same arguments can be applied to water and sanitation services.) For such measures to work, however, energy (water) use must be accurately measured via the introduction of quasi-universal meters. The rapid expansion of existing metering programmes should therefore be encouraged, and supported by donor funding. Information campaigns to explain how low- and middle-income households can change their behaviour to minimise the impact of higher tariffs should likewise be designed, introduced, and supported.
- *Demand side: Refocus social protection schemes on water and energy tariff hikes.* In both the Kyrgyz Republic and Tajikistan, significant increases in the prices of electricity, heat, water and communal services are anticipated, as inevitable components of much-needed energy and water sector reforms. According to government plans, however, households in the Kyrgyz Republic may expect 138% increases in electricity tariffs during 2008-2012. Such an increase would *ceteris paribus* reduce the real income of pensioners by some 21%. Early efforts to refocus social protection schemes on those most vulnerable to these tariff hikes could pay large dividends.

- *Agricultural reforms to reduce unsustainable water use.* Movement away from centralised control over agricultural production in support of the cotton monoculture, to permit farmers greater latitude in deciding what to plant and where to sell their crops to (and at what prices), removing barriers to community investments in water reclamation, micro-hydro plants, or alternative energy technologies—this can go a long way toward reducing Central Asia’s staggeringly high levels of water used per dollar of farm output produced. Policies to support the commercial introduction and expansion of drip-irrigation, rain-water capture, and other water-saving technologies could also go a long way.

Strategy:

- *Re-prioritise policy frameworks to address water, energy, and food insecurities.* While national development strategies provide a realistic framework for action, they sometimes have certain “wish list” characteristics, featuring large projects with significant funding gaps. Prioritisation exercises are typically required in response. The imperatives of reducing risks to water, energy, and food security offer a good framework for conducting this prioritisation. Issues associated with food, water, and energy security and the reforms to strengthen the institutions managing these sectors should be given a more prominent place in these documents. Likewise, the energy sector action plans drafted in Tajikistan and the Kyrgyz Republic to respond to the on-going energy insecurities rarely make reference to the longer-term strategies. Governments, UN country teams, and the international community should focus on ensuring that issues associated with food, water, and energy security are properly addressed in the formulation of the new CDS in the Kyrgyz Republic, the new PRS in Tajikistan, and the JCSS and UNDAFs in both countries.
- In particular, *ensure that the new PRS/CDS, JCSSs, and UNDAFs focus holistically on the:*
 - consistent treatment of water, energy, and food insecurity issues;
 - linkages between the disaster prevention, humanitarian response, early recovery, and development dimensions of these insecurities;
 - appropriate linkages to national policy instruments (e.g., budgets, sectoral reform strategies);
 - identification of the financing gaps; and
 - availability of appropriate and coordinated funds and technical assistance from the donor community.
- In terms of *early recovery* activities (the intermediate stage between emergency-humanitarian response and development programming):
 - These activities should link relief activities to longer-term community support programming (by government and international agencies) in health and disaster management, thereby helping to address the underlying causes of vulnerability to disasters. In Tajikistan, for example, early recovery could be supported by the designation of early recovery focal points in each of the REACT sectors/clusters. In

the Kyrgyz Republic, the office of the UN Resident Coordinator could host an early recovery team that works together with the Disaster Reduction Coordination Unit.¹²

- Early recovery programming should be linked to national disaster management strategies and mechanisms, and should be aligned with national UNDAF processes. It should focus on developing the capacity for comprehensive UN country team responses, to more effectively support the Resident Coordinator and government partners in moving quickly out of emergency and humanitarian disaster situations.
- Wherever possible and advisable, *adopt regional approaches to water, energy, and food security issues.*

¹² The DRCU was set up as part of the Inter-Ministerial Commission for Disasters. It is made up of UN agencies, donor organisations, the Red Cross Movement, and international and national NGOs, with the aim of maintaining a unified policy and strategy in disaster response and decision making in humanitarian actions.

IV—Recommendations for immediate action

The following recommendations should be implemented immediately, in order to ensure that the UN system and the international community are not taken by surprise should the upcoming winter be as severe as last year's (or worse):

Information/communications: Urgent agreement is needed concerning what information should be communicated on a regular basis between governments, UN agencies, the World Bank, and other actors active in Central Asia. In this respect, a “quick and dirty” set of indicators—an “immediate early warning” mechanism—should be developed with key agencies and institutions in the next few weeks.¹³ Should the indicators in this mechanism point to risks of sufficient magnitude, the decision to invoke surge capacity may be made.¹⁴

Capacity development: UN agencies and governments alike need more capacity to work in the areas of humanitarian relief and early recovery. Humanitarian agencies (e.g., OCHA, UNHCR), governments and the developmental agencies of the UN system need to better understand each other's work in order to establish a seamless continuum between humanitarian relief and early recovery. The cluster system needs to be strengthened, in order to better respond to national needs in those situations where it can be appropriately applied. OCHA's implementation of the humanitarian reform in Central Asia should acquire a more proactive character, including training on leadership and management responsibilities, the cluster approach, key OCHA tools, the consolidated appeal process, and the CERF mechanism. In turn, UN country teams should help OCHA to better understand the policy and programmatic work needed to ensure the sustainability of humanitarian efforts, in coordination with government institutions.

¹³ In Tajikistan, this mechanism should be built on (or aligned with) the “Early Warning Indicators” maintained by UNDP's Disaster Risk Management Project, on behalf of the REACT Secretariat.

¹⁴ Within UNDP, references to invoking surge capacity should be understood either as pertaining to BCPR's SURGE mechanism—or, for emergencies of longer duration, to use of BCPR's emergency grant facility. The UN resident coordinator may request up to \$100K under this facility, which can be made accessible as soon as 24 hours after the request; these funds are to cover immediate costs related to early recovery coordination, assessments, and planning (but not programme activities). They can also be used to finance the deployment of early recovery advisors to the resident coordinator's office for up to six months.

V—Water, energy, and food insecurities: Causes and consequences

Overview

This section describes the causes and consequences of the compound crisis of water, energy, and food insecurity that took hold in Tajikistan during the winter of 2008, and describes how elements of this crisis have since spread to the Kyrgyz Republic. It links the causes of the humanitarian dimensions of the crisis—the acute energy and food insecurity resulting from the cold winter and then hot, dry spring and summer—to the chronic development issues that preceded the winter of 2008. This section also offers a forward looking view on the difficulties these countries face in the winter of 2009 and beyond.

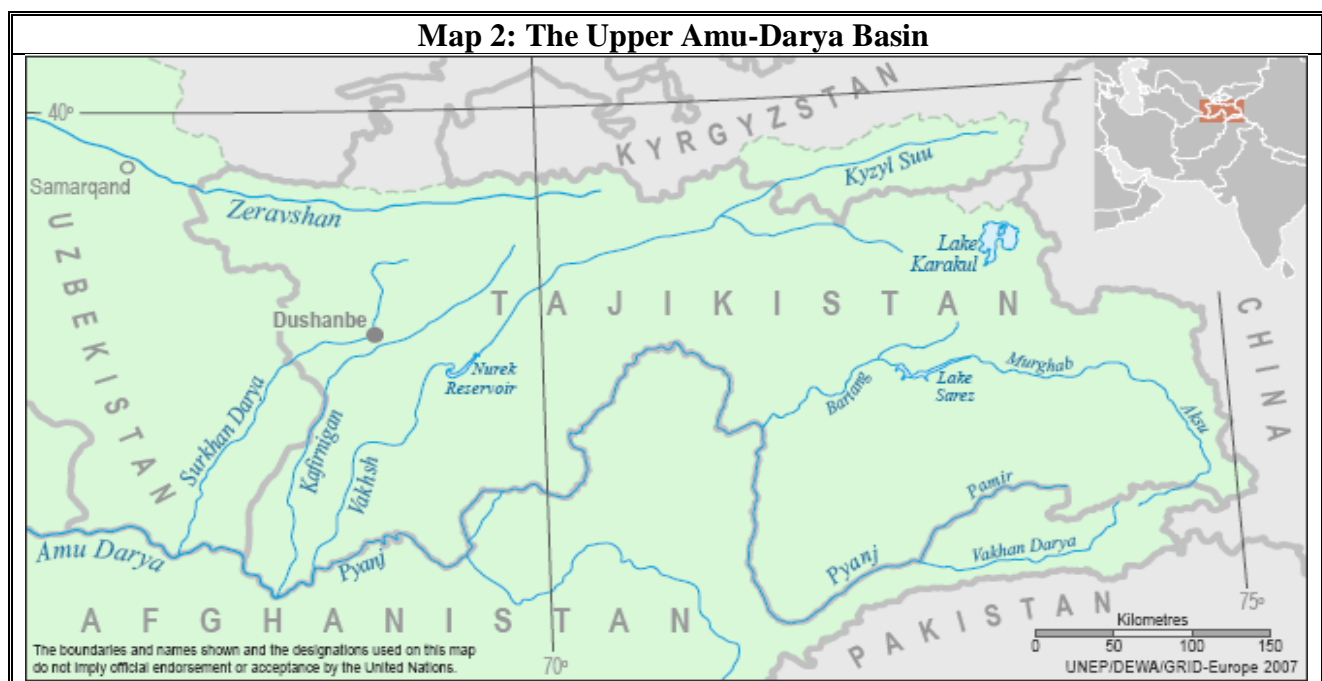
Seasonal factors

The cold winter. The winter of 2007-2008 may be remembered as the coldest in decades in Central Asia, and especially in Tajikistan. Heavier-than-normal snowfall and colder-than-normal temperatures disrupted life throughout the country, isolated remote communities, and severely limited travel between urban centres. Tajikistan's Hydro-Meteorological Agency reported that in December 2007 snowfalls were 245% above the average.¹⁵ In January 2008, daytime temperatures averaged -15°C (instead of the average of -1° to 3°C); rural areas reported lows of -25°C , while Dushanbe experienced ranges of -8°C during the day to -15°C at night. Abnormally cold weather continued until the end of February. (By contrast, temperatures during the winter of 2008-2009 in Tajikistan seem to have generally been at or above normal levels.)



¹⁵ The exception was the Gorno-Badakhshan Autonomous Province (GBAO) province where precipitation was below normal levels.

Much of Tajikistan's electrical and water infrastructure broke down under the impact of the cold and surging demand for heat and power in urban centres. Public health and education structures were severely hit: attendance rates dropped by half¹⁶ as many schools had to close or operated at below freezing temperatures. Health institutions could not function normally "as many hospitals and health centres closed or worked during restricted hours, and in some cases discharged patients as the severe weather further limited the availability of electricity and running water" (OCHA, 2008c). Orphanages, facilities for street children and homes for the elderly struggled to maintain minimal service levels. Agricultural assets and stocks (farm animals, seeds) were destroyed or damaged, particularly affecting vulnerable rural households. The Kyrgyz Republic likewise suffered from the harsh winter. Although calamitous infrastructure damage was avoided, the cold weather restricted inflows into Toktogul while surging demand for heat and electricity led to large water releases and sharp declines in water levels.



The hot, dry spring and summer. The low water levels in the hydropower reservoirs remaining after the cold winter were then exacerbated by abnormally low precipitation levels and hot weather in the spring and summer of 2008. Data from the Kyrgyz Republic's meteorological agency show that precipitation during October 2007-April 2008 was 50-80% below norm (OCHA EWEA, 2008). Data from Tajikistan's meteorological agency also show precipitation dropping to 23-46% of long term average levels during 2008. These data are generally consistent with information provided by the World Meteorological Organisation, and by the US Department of Agriculture.¹⁷ According to these sources, precipitation levels in the upper Amu-Darya basin (Tajikistan and Afghanistan) were only 50% of average levels or in 2008. More moderate (25%) precipitation shortfalls were reported in upper parts of the Syr-Darya basin (i.e., western and southern regions of the Kyrgyz Republic. (By contrast, eastern Kyrgyzstan seems to have received more precipitation in 2008 than in 2007.) These dry trends were accompanied by higher-than-

¹⁶ UNICEF Tajikistan country office data.

¹⁷ See www.pecad.fas.usda.gov/cropeexplorer.

average temperatures, particularly during the second quarter of the year. On the whole, for many of Central Asia's southern and eastern regions, as well as for parts of the Ferghana Valley and the Aral Sea Delta, the spring and summer of 2008 were significantly hotter and drier than average.

Table 1: 2008 river outflows in Tajikistan (compared to 2007, historical averages)					
River	Average outflow (cubic metres/second)			2008 outflow relative to:	
	January-September 2008	2007	Historical averages	2007	Historical averages
Ghund	80	115	92	69%	86%
Vakhsh	364	540	539	67%	67%
Amu-Darya	257	269	345	95%	74%
Varzob	12	19	236	61%	52%
Yohsu	8	7	7	109%	109%
Kofarnihon	47	72	61	59%	75%
Syr-Darya	244	313	323	77%	75%
Obihingov	236	209	192	112%	122%
Isfara	10	22	14	45%	71%

Source: HydroMeteorological Service of Tajikistan

Not surprisingly, this warm dry weather was accompanied by below-normal river flows. As the data in Tables 1 and 2 show, flows in those portions of the Amu-Darya and Syr-Darya (Central Asia's two major river systems) lying in upstream Tajikistan and the Kyrgyz Republic were below historical averages in 2008.

Table 2: Water volume in the Kyrgyz Republic (May – June 2008)¹⁸	
<i>Province</i>	<i>Relative to norm¹⁹</i>
Batken	90%
Chui	65%
Issyk-Kol	64-96%
Jalalabad	50%
Naryn	50-57%
Osh	60%
Talas	56-90%

While these trends initially gave rise to fears about the 2008 harvest, the official data from Tajikistan and the Kyrgyz Republic report growing agricultural output in 2008. Movement away from cotton to the cultivation of less water-intensive foodstuffs and the bringing of additional acreage under cultivation (compensating in part for drought-related reductions in yields) seem to have been responsible for this relatively hopeful outcome. Nonetheless, the drought conditions pose

¹⁸ Apasov, "Expectations in the spheres of food availability and accessibility, and food prices in Kyrgyzstan", p. 2.

¹⁹ Information based on Kyrgyz Meteorological data. River flow rate norms are based on averages for water flows collected over thirty years.

two potential risks. Most immediately, the dry spring and summer, coming after the cold winter and the surge in demand for electricity, limited hydropower prospects during the winter of 2009. Longer term, these conditions may reduce 2009 agricultural yields, starting with the winter wheat harvest in the spring. This would seem to be a particular worry if upstream Tajikistan and the Kyrgyz Republic maximally exploit their (limited) hydro resources to generate heat and electricity during the winter of 2009—as seems likely. Perhaps anticipating this eventuality, the US Department of Agriculture has forecast 24-25% reductions in the 2008-2009 winter wheat harvest in Tajikistan and Turkmenistan, as well as a 3% reduction in Uzbekistan’s winter wheat harvest.

Hydrological trends

Syr-Darya basin: Many of these concerns centre on the Toktogul reservoir and hydropower station on the Naryn river (a Syr-Darya tributary). The Toktogul hydropower station, with its annual generation capacity of 1.2 gigawatts of electricity (see Table 3), is Central Asia’s largest. As its active storage capacity (14.5 billion cubic metres) exceeds the Naryn river’s average yearly inflow (*circa* 12 billion cubic metres), Toktogul is a multiyear storage facility. Together with four smaller hydropower stations on the Naryn Cascade, Toktogul produces 93% of the electricity used in the Kyrgyz Republic.

Table 3—Toktogul reservoir: Basic facts, January-March 2008 flows	
<i>Basic facts</i> ²⁰	
Reservoir area: 284.3 square kilometres	
Designed full supply levels: 900 metres (19.5 billion cubic metres)	
Dead storage level: 837 metres (5.5 billion cubic metres)	
Effective storage drawdown: 14 billion cubic metres	
Maximum firm water yield: Estimated at 90% of water availability	

Toktogul water flow: January-March 2008

Category	Percentage
Inflow	-25%
Outflow	28%
Volume	-33%

First-quarter average, relative to first-quarter averages from 1991-2007.
Source: SIC-ICWC, provided by Water Agency of Japan; UNDP calculations

While the Kyrgyz Republic avoided calamitous infrastructure damage during the winter of 2008, the cold weather restricted inflows into Toktogul while surging demand for heat and electricity led to large water releases and sharp declines in water levels (see Table 3 above). Whereas water inflows into the Toktogul during the first quarter of 2008 were some 25% below their historical January-March averages, outflows were 28% above historical averages. As a result, the water volume at Toktogul during this time was 33% below average; by winter’s end (in April), the volume had dropped to some 40% below average, relative to monthly levels for 1991-2007.

²⁰ Information from Masayuki Shiraishi, 31 October 2008 (Japanese Water Agency). These levels are based on the original data from 1974. Sedimentation build-up, which reduces effective storage capacity, is not reflected.

While water levels and volumes then rose in absolute terms, the 35-40% seasonally adjusted shortfall (relative to the same month during the previous 17 years) remained through the fall.

If continued unabated, these trends threatened to bring Toktogul to its “dead level”²¹ in February or March.²² The response adopted by Kyrgyzstani government was able to reduce this shortfall considerably by the end of 2008, but uncertainty persisted as to whether Toktogul would be able to generate electricity continuously throughout winter (even at reduced levels). As is explained below, avoiding hitting the “dead level” has been a major focus of government preparation for the 2009 winter. Even if the worst is avoided, however, the shortfall does not bode well for electricity generation in the winter of 2009-2010, or for 2009 irrigation prospects for farming areas downstream, particularly in the Ferghana Valley, but also in northern Tajikistan, central Uzbekistan, and southern Kazakhstan.

Amu-Darya basin. Tajikistan’s main reservoir and hydropower facility is at Nurek, on the Vakhsh river. As was the case with Toktogul, monthly water volumes at Nurek in 2008 were consistently below seasonally adjusted averages. While this shortfall is not as serious as in Toktogul, it remains a source of concern—particularly in light of Uzbekistan’s January 2009 decision to halt the transmission of Turkmenistan electricity to Tajikistan. The government in late January responded to these developments by further tightening Tajikistan’s electricity rationing regime: according to press reports, from 27 January households in Dushanbe will only 15 hours of electricity per day. Further reductions for other regions are anticipated as well.

“Electric shock” hits industrial growth, household energy security

These low water levels have depressed electric power generation and industrial production in 2008. This “electric shock” is most apparent in Tajikistan, where the official statistics show that electric power generation dropped 8%. While 18% growth in electricity in 2008 imports helped cushion this blow, electricity consumption still dropped some 3% last year. Not surprisingly, industrial output through the first three quarters of 2008 was reported down 2.5%; preliminary data suggest a sharper decline for the year as a whole. In the Kyrgyz Republic, an 18.5% decline in electricity production was reported during January-November 2008. Surprisingly, the volume of industrial output in the Kyrgyz Republic was reported up 15.2% during this time. However, production from the Kumtor gold mine complex (which accounts for more than a third of industrial output—and has its own generators) was responsible for much of this increase. Without Kumtor output, industrial production during January-November 2008 was reported down 1.2%.

Inadequate access to heat and electricity services has a chronic character in both Tajikistan and the Kyrgyz Republic. However, the energy shortages that took hold in Tajikistan in the winter of 2008, and which now seem to be taking hold in the Kyrgyz Republic, have a more acute character, and are producing new forms of socio-economic deprivation. In both countries, electricity users are suffering from planned and unplanned cut-offs in access to electricity. In the Kyrgyz Republic, planned blackouts were introduced in March 2008, lifted in mid-June, and then re-imposed in August, once it became clear that water volumes at Toktogul would not reach planned

²¹ “Dead level” refers to levels or volumes below which electricity can not be generated.

²² “If electricity consumption limits are not observed, Kyrgyzstan is due to experience an energy crisis in February 2009”, Minister of Industry, Power and Fuel Resources Saparbek Balkibekov told a Bishkek news conference on 10 November. Low water levels at Toktogul were given as the reason. Source: “Kyrgyzstan: Energy Minister Warns of Power Shortage This Winter”, *Eurasia Insight*, 11 November 2008.

levels by the end of the summer. On 7 October, it was announced that daily power cuts would be extended to 12 in most provinces. Only nine hours of electricity per day would be supplied in Batken province; in Bishkek, only 14 hours of electricity per day is guaranteed. Further reductions in electricity demand are to result from the closures from 25 December through 1 March 2009 of those schools that use electricity for heating; coal-heating systems are to be installed in new schools. In rural areas of Tajikistan (except for Gorno Badakhshan), household access to electricity (provided by the Barqi Tojik utility) is currently limited to 3.30 – 7.30 and 17.30 – 20.00 daily. Access is further reduced for other users (businesses, schools, hospitals—unless they have their own generators). In addition, the blackouts are causing the electric water pumps to wear down and break. Villages around Bishkek are experiencing water shortages and are unable to finance repairs.

Still, the official socio-economic data suggest that impact of the “electric shock” has thus far been largely confined to the industrial sector. GDP during the first three quarters was reported up 7.2% in Tajikistan and 6.6% in the Kyrgyz Republic. Household incomes were boosted by surging remittances: IMF data show 2008 remittance inflows up 50% (to \$2.7 billion) in Tajikistan; National Bank data show remittance inflows in the Kyrgyz Republic running 45% above year earlier levels through the first nine months of 2008. Remittances in both countries helped fuel growth in spending and consumption: data on the CIS statistical office web site show the volume of retail trade up 7% in the Kyrgyz Republic and 4% in Tajikistan during the first three quarters of 2008.

Agriculture seems to have escaped. . . so far

In both countries, the negative effects of the drought and locust infestation on agricultural production seem not to have been very large in 2008. In the Kyrgyz Republic, data for the first 11 months of the year show a 6% increase in grain harvested; growth in raw milk, wool, and meat production was in the 1-3% range. Preliminary data for Tajikistan suggest double-digit increases in agricultural output in 2008; output of eggs, vegetables, milk, potatoes, and grains were reported up by 35%, 8%, 3%, 3%, and 1%, respectively. Data for Tajikistan reported on the CIS Statistical Committee web site through October show production of fruit, vegetables, and potatoes up by 80%, 13%, and 11% over 2007 levels; cattle, sheep, and goat herds on 1 October were reported to have grown 17-18% over year-earlier levels. This growth in food production was accompanied by reductions in cotton output, which dropped 24% in Tajikistan and about 2% in the Kyrgyz Republic (during the first 11 months).

Of course, official data from these (and other) countries are not always above reproach, and are sometimes inconsistent with the figures from other sources. According to data from the FAO/WFP/UNICEF survey in Tajikistan, 30% of the farmers reported cattle losses as a result of the harsh winter of 2007-2008; 60% reported the loss sheep or goats; and 54% reported the loss of poultry.²³ If correct, these losses would have important negative implications for food security in the upcoming winter. A similar picture would seem to be apparent in the Kyrgyz Republic. In September 2008, the International Centre for Soil Fertility and Agricultural Development (IFDC), via the Kyrgyz Agro-Input Enterprise Development Project (KAED), conducted a rapid assessment of the availability of fodder and livestock health ahead of the 2008/09 winter. The assessment concluded that there is a worse-than-usual feed crisis in the country. Some 20-25% of the cattle could die this winter, unless appropriate action is taken. Dry climatic conditions, over-grazing, and

²³ According to the May 2008 FAO/WFP/UNICEF survey, 73% of farmers attributed the loss of cattle to severe cold conditions (FAO/WFP/UNICEF Rural Tajikistan Emergency Food Security Assessment, May 2008).

escalating hay prices had left farmers increasingly unable to feed their herds.²⁴ Such inconsistencies underscore the importance of continued efforts to improve the quality of official statistics.

Table 4: Food, consumer price inflation in Tajikistan and the Kyrgyz Republic (2007-2008)				
	<i>Tajikistan</i>		<i>Kyrgyz Republic</i>	
	<i>2007</i>	<i>2008</i>	<i>2007</i>	<i>2008</i>
Consumer price inflation	13%	21%	10%	25%
Food price inflation	15%	26%	15%	32%
- Cooking oil	51% *	71% *	19%	50%
- Bread	8% *	62% *	26%	51%
- Milk	60% *	25% *	18%	31%

Average annual rates.

** For Dushanbe (source: UNDP-Tajikistan early warning reports).*

Food insecurity: From chronic to acute

Ironically, growth in agricultural production in 2008 did little to improve food security. Driven by higher global food and energy prices, consumer price inflation rates rose above 20% (on an average annual basis) in both Tajikistan and the Kyrgyz Republic last year. As the data in Table 4 show, food price inflation rates likewise accelerated, reaching 32% in the Kyrgyz Republic. As a result, despite continuing growth in food production and household incomes, according to UN estimates millions of people became increasingly unable to purchase basic foodstuffs in both countries.

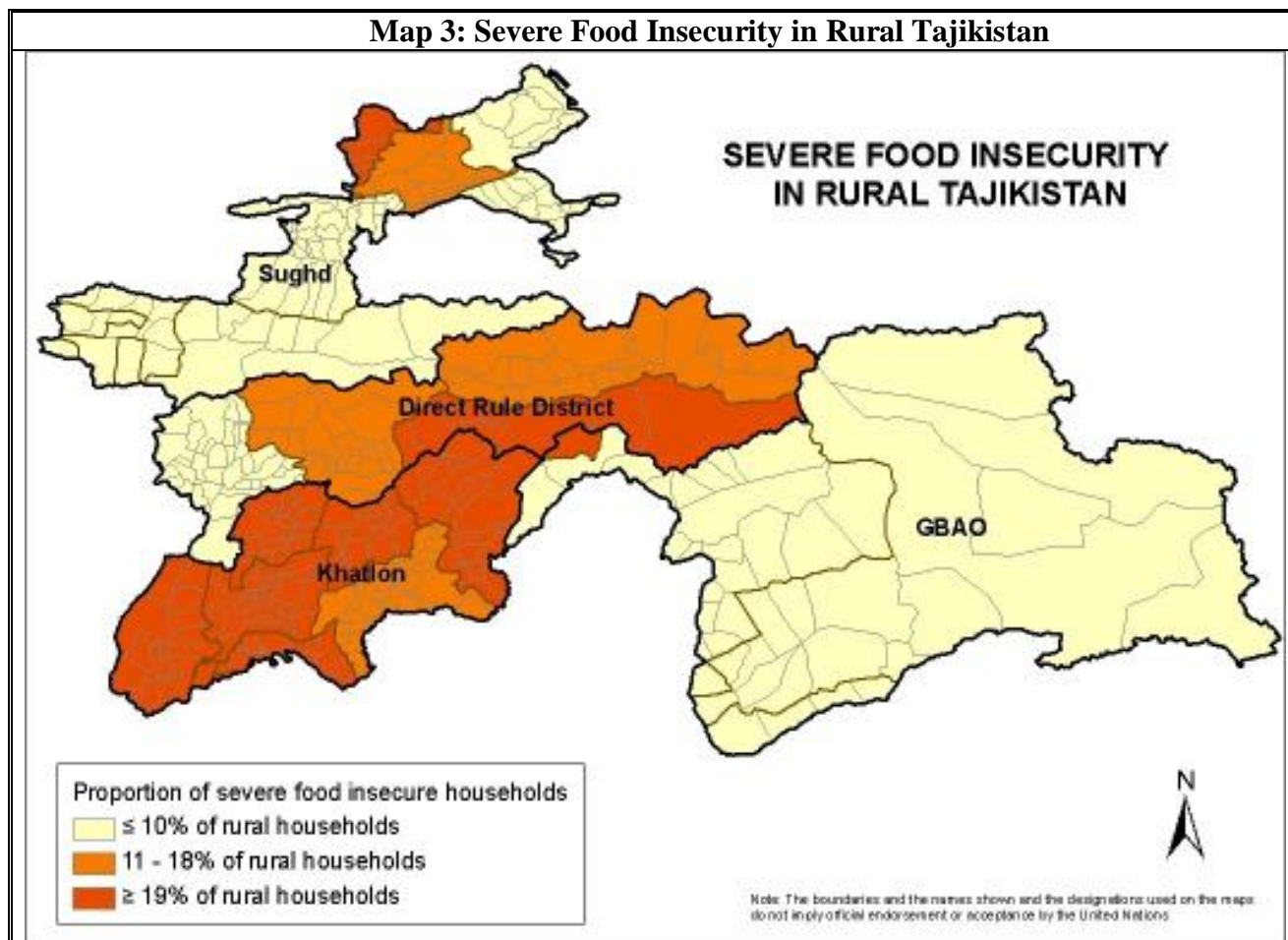
Who are the food insecure? Such questions are perhaps best understood in the context of absolute poverty and deprivation. This is particularly the case in Tajikistan and the Kyrgyz Republic, which together with Uzbekistan are the only three low income countries in the Europe and CIS region.²⁵ According to internationally comparable World Bank data, the share of the population defined as living in poverty (relative to a threshold of \$2.15/day in consumption expenditures, using 2000 purchasing-power-parity exchange rates) in 2003 was 70% in the Kyrgyz Republic and 74% in Tajikistan. In rural areas these rates were even higher, at 77% and 76%, respectively.²⁶ While these rates no doubt fell during 2003-2006, there can be little doubt that absolute poverty remains important in both countries—particularly in rural areas. It also seems likely that, despite the economic growth that these countries enjoyed during 2007-2008, its pro-poor characteristics have been weakened by rising prices for foodstuffs, which comprise some two thirds of the consumer price index in both countries and absorb larger shares of poor households' budgets. In such circumstances, food insecurity necessarily has a chronic character, related to its cost (relative to poor household incomes) rather than to physical availability.

²⁴ USAID and IFDC, "A Rapid Assessment of the Livestock Feed Situation in Kyrgyzstan for the Coming Winter", by the KAED Project, September 2008, p 2-3.

²⁵ See <http://siteresources.worldbank.org/DATASTATISTICS/Resources/OGHIST.xls>

²⁶ These data come from *Growth, Poverty and Inequality: Eastern Europe and the Former Soviet Union*, World Bank, Washington D.C., 2005.

Map 3: Severe Food Insecurity in Rural Tajikistan



In Tajikistan, the WFP-led assessment conducted in the spring of 2008 found that urban households that must rely exclusively on markets for their food supply (without access to land to grow their own food) are most likely to experience food insecurity. The WFP-led study estimates that 15% of the urban population (200,000 people) are severely food insecure, while another 22% (300,000 people) are moderately food insecure.²⁷ Some 33% of the urban population (437,000 people) are assessed as being chronically food insecure. These are households without employed family members, with poor income-generating prospects, no access to credit or other capital, and which are characterised by old age, and/or disease.²⁸ The cities of Khujand and Taboshar in Sughd province, and Kurgan Tyube and Sarband in Khatlon province, are considered to be “hotspots” of urban food insecurity.

The WFP-led assessment found that 34% of the rural population (1.68 million) were food insecure in May 2008; 11% of rural households (540,000 people) were classified as severely food insecure, while 23% of rural households (1.14 million people) were moderately food insecure.²⁹ Severely food insecure rural households were found to rely on income from self-employment or

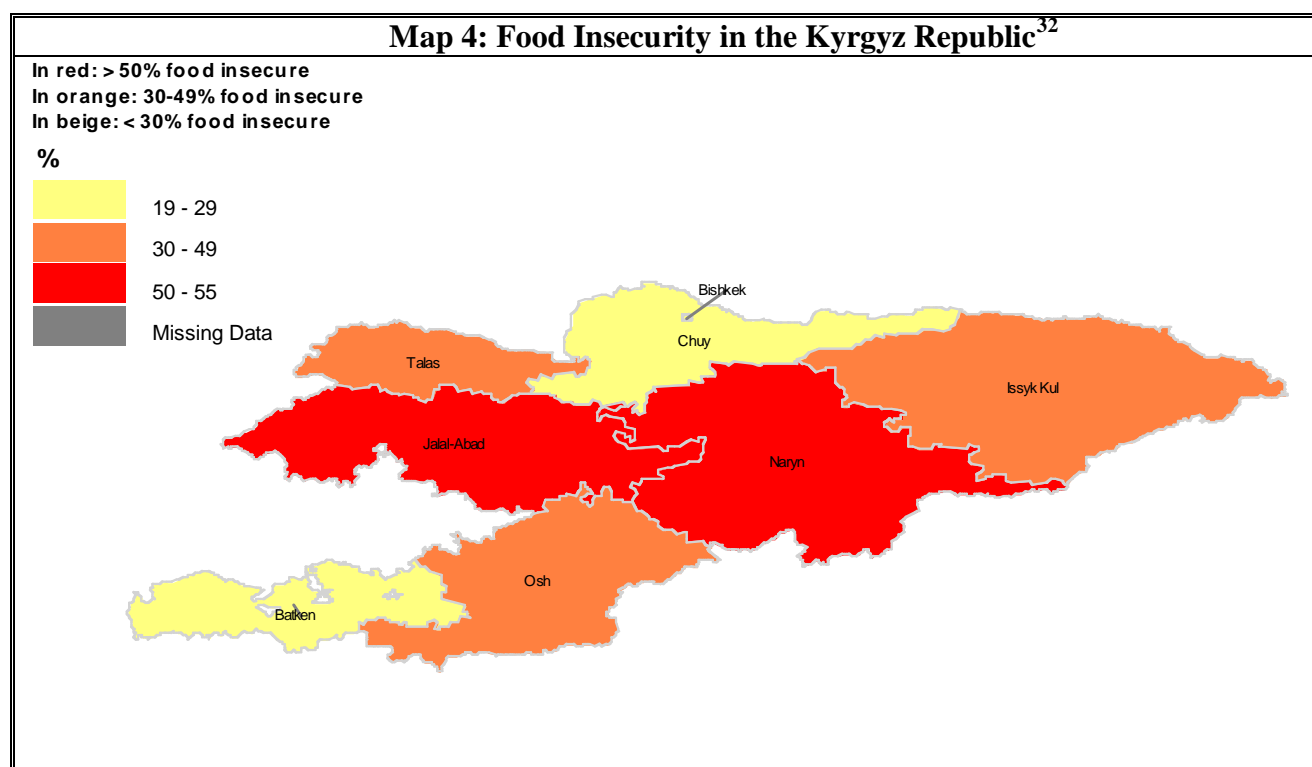
²⁷ The diet diversity of the *severely food insecure* is classified as “poor” (i.e., mainly bread, potatoes, pasta/little oil, sugar and vegetables/no pulses or animal products). Children eat twice a day and adults eat less than twice a day. The diet of the *moderately food insecure* is slightly better but still inadequate and entails risk of mineral and vitamin deficiencies in the short and medium term. Adults and children eat twice a day on average (WFP, Emergency Food Security Assessment, Tajikistan (urban areas), July 2008).

²⁸ *Ibid.*

²⁹ WFP, “Tajikistan Emergency Food Security Assessment, Tajikistan (Rural Areas)”, May 2008.

remittances (30% of severely insecure households), on agricultural wage labour (20%), on pensions/social benefits (15%), and on non-agricultural wage labour (10%). Most of these are not reliable income sources. Almost 40% of moderately food insecure households rely on remittances as their main income source; less than 20% rely on self-employed activities, 14% on wheat/potato sales, and 13% on agricultural wage labour. For this group, remittances are likely to be more regular and larger than for the severely food insecure.

Many of these issues are present in the Kyrgyz Republic, which like Tajikistan is a net food importer and has relied heavily on grain purchases from Kazakhstan. In its October 2008 food security assessment,³⁰ WFP found that some 1 million people (20% of all households) were severely food insecure during the first quarter of 2008. Another 16% were moderately food insecure (808,000 people, 202,000 households) and 66% were food secure. As shown in Map 4, the highest rates of severe food insecurity were in the Naryn (38%), Issyk-Kul (32%), Jalal-Abad (28%), Osh (26%), and Talas (21%) provinces. In contrast to Tajikistan, severe food insecurity in the Kyrgyz Republic seems to be more widespread in rural than in urban areas, as rural food insecure households often have no access to improved water and sanitation services. They also possess few assets, including land. In both countries food insecurity is sometimes exacerbated by geographic remoteness. According to official estimates, some 150,000 people (23,000 families)³¹ living in remote villages in the Kyrgyz Republic are exposed to both socio-economic and disaster related risks, especially in the winter when roads are blocked.



³⁰ World Food Programme, “Food Security Assessment in the Kyrgyz Republic: a Re-Analysis of the Kyrgyz Integrated Household Survey 2006, 2007 and 1st Quarter of 2008”, 3 November 08. As noted in the WFP-RRA, the number of food insecure households is estimated by combining a food consumption indicator with a food access indicator.

³¹ Kyrgyzstan Winter Preparedness and Response Plan, 3 October 2008.

³² Source: World Food Programme, “Food Security Analysis of the Kyrgyz Integrated Household Survey 2006, 2007 and 1st Quarter of 2008”, 4 November 2008, p 4.

The survey also found that:

- food insecurity tends to correlate positively with household size and inversely with education and age (for household heads);³³
- male-headed households are more likely to be food insecure than female-headed households;³⁴
- the diet (measured in terms of kilocalorie and fat content) of the food insecure has deteriorated since 2006 (from an already low basis);³⁵
- poor hygiene and inadequate nutrition has contributed to increased rates of stunting and underweight among the severely food insecure; and
- higher food prices have caused some severely food insecure families to forego the use of much needed health services.³⁶

These findings are consistent with official nutrition data, which indicate that daily protein consumption fell during 2006-2007, particularly for children.³⁷

Food insecurity in the Kyrgyz Republic is clearly a chronic phenomenon, affecting much of the country. Groups such as the elderly poor (numbering some 100,000), informal migrants (some 12,000), residents of penal and other “closed” state institutions (some 40,000), the homeless (some 5,000), the sick and infirm, children living in large households and those suffering from extreme poverty are clearly at risk. On the other hand, the WFP-led assessment found that (as of early 2008) there were no indications of drastic deterioration in food security, although some moderately food insecure households had begun to sell assets. Solidarity mechanisms in rural areas seemed to be providing important support for the severely food insecure.

The government has sought to use the unified monthly benefit (UMB—the main safety net targeted to poor families with children), and the monthly social benefit (MSB—which targets such categorical groups as the disabled, orphans, elderly) to support those most vulnerable to food insecurity. The UMB, which was initiated in January 1995, provides cash transfers to poor families with children. Targeting is determined both by means-testing categorical criteria and the calculation of unit benefits. Although the UMB seems effective at targeting the poor (75% of recipients are among the poorest 40% of the population), funding constraints limit its reach to only 25% of the country’s poorest. In addition, the general minimum consumption level to be attained using the UMB is determined by the state budget, rather than by the actual cost of the consumption basket. As a result, UMB payments can be well below the poverty line.³⁸ Finally, UMB recipients can only receive benefits at their place of residential registration. Unregistered migrants in Bishkek (including those fleeing high levels of rural food insecurity) are therefore ineligible for this benefit.

³³ This is something of a change from the past, when elderly-headed households were less likely to be food insecure. The change may have resulted from the fact that pensions have not kept up with rising food and energy prices.

³⁴ Male-headed households are typically larger and are less likely to receive pension and remittance incomes.

³⁵ This is in terms of kilocalorie and fat content from an already low basis. World Food Programme, “Food Security Analysis of the Kyrgyz Integrated Household Survey 2006, 2007 and 1st Quarter of 2008”, 4 November 2008, p 5.

³⁶ *Ibid*, p 5.

³⁷ National Statistical Committee, “Food Security Information Bulletin: Kyrgyz Republic”, 2/2008, pp 31 & 34.

³⁸ World Bank, “The Global Food Crisis Response Program Project Paper on a Proposed Additional Financing Grant to the Kyrgyz Republic for a Health and Social Protection Project”, 27 May 2008, 5

In the capital there are an estimated 12,000 persons with documentation problems.³⁹ Other mechanisms to support the food insecure are managed by the Ministry of Agriculture, which reportedly⁴⁰ has a list of 221,000 severely food insecure families throughout the country, which it seeks to support with emergency wheat deliveries.

What is the outlook for food prices in 2009 and beyond? On the one hand, consumers in Central Asia as a whole, and in Tajikistan and the Kyrgyz Republic in particular, are still suffering from the effects of the sharp increase in global food prices during 2007-2008. (By contrast, higher world market food prices provided certain benefits to Kazakhstan and Uzbekistan, which are net food exporters.) These pressures could be further exacerbated by the drought problems described above. The US Department of Agriculture reports that the wider Middle East and Central Asia region in 2007-2008 experienced a sharp drop in grain production, spurring governments to enact grain export bans and resulting in abnormally large region-wide grain imports.⁴¹ A 22% reduction in the 2009 winter wheat harvest is likewise forecast, with particularly large declines for Afghanistan, Iran, Iraq, Pakistan, and Syria. On the other hand, imported food costs have dropped sharply with falling global food prices since mid-2008. Whereas Tajikistan was paying \$314 for a ton of imported wheat in July 2008, this price had fallen to \$234 in December.

Structural drivers: Agriculture and energy

The “electric shock” produced by the low water levels in the Nurek and Toktogul hydropower stations curtailed industrial growth in 2008 and, together with the impact of high global food prices, increased risks of poverty and deprivation for vulnerable households. But continuing strong growth in remittances, combined with what seems to have been a surprisingly good harvest in 2008, have thus far moderated the impact of the shock.

Going forward, three types of risks seem most important.

The impact of the global economic crisis on Tajikistan and the Kyrgyz Republic is likely to increase in 2009. These countries’ external positions—in terms of remittances, export demand, and bank financing—could be quite exposed to the adverse developments that are now taking hold in the Russian Federation and Kazakhstan. Both of these countries—which are major export markets and sources of remittance incomes and bank finance for Tajikistan and the Kyrgyz Republic—are expected to experience low or zero economic growth rates in 2009. According to press reports,⁴² National Bank of Tajikistan Governor Sharif Rahimzoda announced in early January 2009 that Tajikistan’s gold and foreign currency reserves dropped from \$350 million to under \$200 million during 2008—a figure that would cover less than one month of Tajikistan’s \$3 billion import bill (according to IMF projections). The decline, which according to Rahimzoda reflects the need to support the exchange rate, occurred despite the inflow of some \$2.7 billion in remittance incomes over the course of the year. Most of these tensions would seem to have developed in the fourth quarter of 2008, when growth in remittance inflows dropped off sharply, and when electricity imports rose by 71% (in value terms). In the Kyrgyz Republic, by contrast, the December 2008 IMF report notes that “the [2008] current account deficit is projected to widen to 6½ percent of GDP,

³⁹ CARRA interview with social researcher, Bishkek, 2 October 2008.

⁴⁰ ACTED, “Food Security Concept Kyrgyzstan”, 2008

⁴¹ “Middle East and Central Asia: Continued Drought in 2009/10 Threatens Greater Food Grain Shortages”, Source: <http://www.pecad.fas.usda.gov/> (accessed on 12.10.2008)

⁴² “Tajikistan: Drowning in Foreign Debt”, *Eurasianet*, 12 January 2009 (<http://www.eurasianet.org/departments/briefs/eav011209c.shtml>).

compared to a near-balance in 2007”, and that “due to higher prices alone, the (net) annual cost of importing food and energy is projected to be almost \$300 million (6 percent of GDP) higher in 2008 than in 2007.”⁴³ Some 2 percentage points of this decline are due to higher prices for gas imports from Uzbekistan—a shock that Tajikistan will also experience. Both governments are therefore seeking expanded IMF support in 2009, under the Exogenous Shocks Facility (Kyrgyz Republic), and a new Poverty Reduction and Growth Facility (Tajikistan).

The severity of the winter of 2009, and of future winters, and their possible implications can not be predicted. Through mid-January, the winter of 2009 had been relatively mild in Central Asia, particularly for Tajikistan. Still, a sustained cold snap combined with low water levels in Nurek and Toktogul could significantly reduce heat and electricity supplies and produce broader unfavourable socio-economic consequences. Moreover, if temperatures in Tajikistan have followed seasonal patterns, precipitation was well below normal levels during November-December 2008.

Regional cooperation: The presidents of the five Central Asian countries pledged at the CIS Summit in Bishkek on 10 October to strengthen regional cooperation, in order to better manage the supra-national aspects of water and energy tensions affecting Tajikistan and the Kyrgyz Republic.⁴⁴ More effective regional cooperation mechanisms, to facilitate the trade/transit/transmission of electricity, gas, coal, and other shortage products from the wealthier downstream to the poorest upstream countries in Central Asia, could be extremely useful.

Longer term, prospects for reducing water/energy/food insecurities in Central Asia hinge on reforming the energy and agricultural sectors.

Energy sector reform: Energy sectors in many transition economies have been successfully restructured and modernised. Energy intensities and greenhouse gas emissions have fallen; soft coal consumption has been replaced by gas; and more energy-efficient automobiles, appliances, and building codes have been introduced. Significant extensions of the geographic scope and quality of energy services, reductions in energy and financial losses, and improvements in transparency and cash flow within the sector have typically resulted. This modernisation has been made possible by the rebalancing of energy tariffs, which both reduce (typically non-transparent) subsidies from commercial users to households and budget-funded organisations, and reduce burdens on generation and transmission capacity by encouraging energy consumption at off-peak hours. The partial privatisation and marketisation of the energy sector—particularly electricity generation, also trunk gas and oil pipelines, and oil, gas and coal extraction, in order to attract much needed private capital and expertise—has also figured prominently. The state’s role in the energy sector has similarly been redefined, away from the direct management of energy production and supply, towards the regulation of the sector’s natural monopoly elements, expanding network coverage, promoting energy security and the development of renewable energy sources, and the like. While households have typically ended up paying more for energy than was the case before 1990, the effects of higher tariffs are often offset by savings from reduced energy consumption during peak load periods, and improvements in service quality and reliability.

⁴³ These figures and quotations come from IMF, “Republic of Tajikistan: First Assessment under the 2008 Staff-Monitored Programme”, December 2008; IMF, “Kyrgyz Republic: Request for an 18-Month Arrangement Under the Exogenous Shocks Facility”; and UNDP-Tajikistan, “Early Warning Indicators Report”, 20 January 2009. According to the IMF report, Tajikistan’s balance of payments was in surplus during the first three quarters of 2008.

⁴⁴ *Parties reach consensus on all issues raised at the meeting, which covered hydro-energy support, fuel resources supply, water accumulation in the Toktogul and Nurek reservoir* — Kyrgyzstani Foreign Minister Karabaev.

In Central Asia, the evolution of the energy sector has reflected a different logic, revolving around the “water-energy nexus” and tensions between upstream (Tajikistan and the Kyrgyz Republic) and downstream (chiefly Uzbekistan, but also Kazakhstan and Turkmenistan) countries. At bottom is the post-1990 breakdown of the Soviet-era regime for energy cooperation among the Central Asian republics, under which the upstream hydropower facilities (chiefly Toktogul and Nurek) were used primarily as reservoirs to irrigate water-intensive agricultural sectors downstream in the summer. In exchange, the downstream countries provided Tajikistan and the Kyrgyz Republic with the fossil fuels (at subsidised prices) needed to generate electricity and heat in the winter.

The marketisation of post-Soviet oil and gas markets ended this arrangement, as the much higher market prices Uzbekistan and Kazakhstan charge the upstream countries for fossil fuels (as well as delivery uncertainties) increased the demand for hydropower and convinced Tajikistan and the Kyrgyz Republic to use Nurek and Toktogul primarily for hydropower generation. The ensuing large winter water releases (to generate heat and electricity during peak demand season) produced winter flooding in the Syr-Darya basin that damaged the downstream countries’ water infrastructures, while stoking fears of water shortages during the summer irrigation season. In the meanwhile, the controversies around the water-energy nexus diverted attention from the tangible benefits other transition economies derived from energy sector reforms. Nearly two decades after independence, neither country has been able to attract significant foreign capital and expertise to the energy sector, or decisively expand the role of alternative energy technologies (e.g., micro-hydro, solar, wind). The continuation of Soviet-era policies keeping household tariffs well below cost-recovery levels has retarded the capital investment needed to maintain the integrity of national energy (and water) supply systems.

The winter of 2008, when Tajikistan’s decapitalised energy infrastructure collapsed and created a humanitarian crisis, demonstrated the consequences of inadequate energy sector reform. According to World Bank specialists, Tajikistan’s household energy tariffs are among the world’s lowest. Not surprisingly, electricity and water tariffs for households and other users have either risen sharply, or expected to do so in the next 12-24 months. In Tajikistan, household electricity tariffs rose 25% (to \$0.021 per kilowatt hour) in January 2009, following a 20% increase in January 2008. While the state-owned Barqi Tojik electricity monopoly has been slow embrace the small-scale micro-hydro (and other alternative energy) projects that can be brought on line with small capital investments, and which donors are willing to co-finance, this may now be set to change: the Tajikistani government in January 2009 tasked the Ministry of Industry and Energy with ensuring the construction of 50 small hydro-power plants⁴⁵ by the end of 2009. The compound crisis was in this sense a wake-up call for energy sector reform.

It may also have been a wake-up call for regional cooperation. At the Bishkek CIS Summit meeting on 10 October 2008, the five Central Asian presidents pledged renewed efforts to cooperate on “hydro-energy support, fuel resources supply, water accumulation in the Toktogul and Nurek reservoirs”. The rationale for this cooperation reflects the downstream countries’ fear that, with water levels at unprecedented lows, and in order to avoid a repeat of last winter’s energy shortages, the Kyrgyzstani and Tajikistani authorities will operate Toktogul and Nurek in full hydropower mode this winter, leaving little water left over for downstream irrigation in the spring and summer of 2009.

The 10 October summit meeting was therefore followed by an 18 October agreement between government representatives, under which Kazakhstan agreed to provide Kyrgyzstan with

⁴⁵ This would be in addition to the roughly 100 such facilities currently in operation.

250 million kilowatt hours of electricity and guarantee the “timely” delivery of coal for the Bishkek Heat and Power Station in 2009. Uzbekistan will likewise guarantee the “additional supply” of 150 million cubic meters of gas to Kyrgyzstan during the first quarter of 2009. In return, Kyrgyzstan committed to release 5.25 billions of cubic meters of water from Toktogul for irrigation purposes, thereby ensuring that the amount water available “at the beginning of the vegetative period in 2009 will not be inferior to 2008”.⁴⁶

In light of the many previous regional cooperation agreements that have not been implemented, prospects for the realisation of the Almaty accord may well depend on efforts by the governments of Tajikistan and the Kyrgyz Republic to take the pressure off their limited hydro generation capacity. These efforts have taken the form of increased procurement and imports of electricity and fossil fuels, as well as stockpiling mazut, generators and other mobile generation equipment. So far, this regional cooperation has born fruit for both Tajikistan and the Kyrgyz Republic. Thanks in part to agreements on electricity supply and transmission with Turkmenistan and Uzbekistan, electricity imports jumped 39% in the fourth quarter of 2008, limiting the decline in electricity consumption to only 3% for the year. In December 2008 it was announced that the government of Kazakhstan had provided the Kyrgyz Republic with \$25 million to pre-finance energy imports from Kazakhstan in 2009.⁴⁷

However, it is unclear whether this cooperation will continue robustly into 2009, particularly in light tensions between the governments of Uzbekistan and Tajikistan regarding the latter’s expansion of the Rogun dam and hydropower station on the Vakhsh river cascade. These governments’ inability to agree on the transmission of Turkmenistani electricity to Tajikistan via Uzbekistan in the new year stopped this transmission in January 2009. This exacerbated pressures on water levels at the Nurek hydropower station, and led the authorities in Tajikistan to tighten electricity rationing in late January 2009.

The critical immediate needs facing Tajikistan and the Kyrgyz Republic make the short-term urgency in increasing energy supplies understandable. Still, they run the risk of diverting attention away from three longer-term energy imperatives.

First, it is not clear that those who were most vulnerable during last winter’s compound crisis in Tajikistan have received the support they need in order to prevent a repeat in the winter of 2009. The “big picture” emphasis on expanding and repairing electric power generation, transmission and distribution capacity may have diverted attention from more prosaic but equally important measures to ensure that schools and hospitals are equipped with the stoves, generators and fuel needed to get through the winter.

Second, the problems now afflicting both countries’ energy sectors are consequences of decades of under-investment, and of inadequate measures to reform and modernise energy sector regulation. The production and distribution of electricity, gas, and other energy in the region remains dominated by state-owned monopolies whose tariffs (for households) are often set below long-run marginal costs, and which are not always interested in power generated via alternative

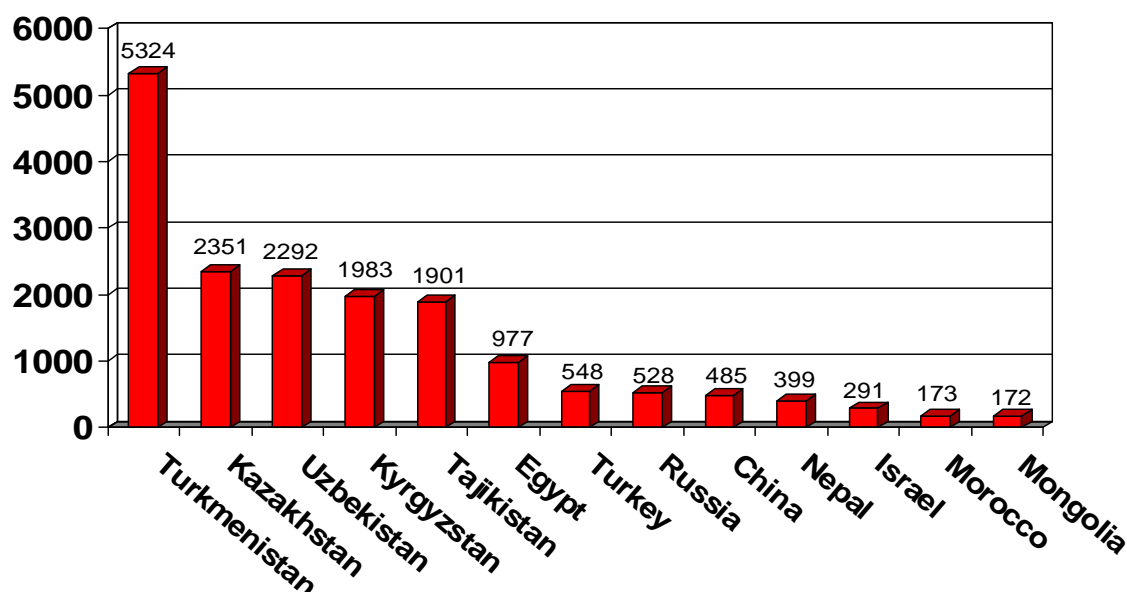
⁴⁶ Kazinform, 20 October 2008, “Podpisan protokol ob ispol’zovanii vodno-energeticheskikh resursov tsentral’no-aziatskogo regiona” [Protocol signed about use of water and energy resources in Central Asia], <http://www.inform.kz/index.php?lang=eng> (last accessed 18 November 2008).

⁴⁷ The Kyrgyz Republic is to use these funds to purchase 160,000 tons of coal and 35,000 tons of mazut, for use in the Bishkek Combined Heating and Power Plant. Source: AKIpress, 9 December 2008, “Minenergo stavit zadachu s 1 yanvarya ogranichivat’ elektroenergiyu tol’ko po nocham” [Ministry of Energy gives itself the task of limit electricity only at night from 1 January], <http://kg.akipress.org/news/64840> (last accessed 9 December 2008).

energy sources, particularly by potential competitors. Measures to provide alternative energy producers with access to power grids, increase transparency within the sector, reduce the administrative burdens on these countries' limited regulatory capacities, and attract private investment to reduce losses and raise energy efficiency are particularly important. The inability of Tajikistan and the Kyrgyz Republic to reverse the decapitalisation within their energy sectors (particularly in terms of generation assets) is a concrete manifestation of these problems.

Third, the drought conditions now affecting the region raise the question of whether Central Asia is running out of water. Until now, the conventional wisdom has held that the distribution of the region's water resources was much more important than overall water levels. This was particularly the case for "upstream" Tajikistan and the Kyrgyz Republic, which until now have been perceived as having immense glacier water repositories. However, according to a report issued this fall by the United Nations Environment Programme and the World Glacier Monitoring Service, glacier area in the Tian Shan mountains decreased by 25-35% during the 20th century. Rates of melt have increased significantly since the 1970s. Accelerating glacier melt may be boosting water flow in the Aral Sea basin today, but possibly at the cost of significant, and enduring, regional water shortages in the future. Such a scenario could spell the end Tajikistan's and the Kyrgyz Republic's hydropower prospects, vision of which feature heavily in these countries' development strategies. It could also mean increased future reliance on fossil fuels, which could be difficult to reconcile with the importance of climate change mitigation. Better modelling of Central Asia's long-term hydrological, meteorological, demographic, and economic prospects is therefore of critical importance.

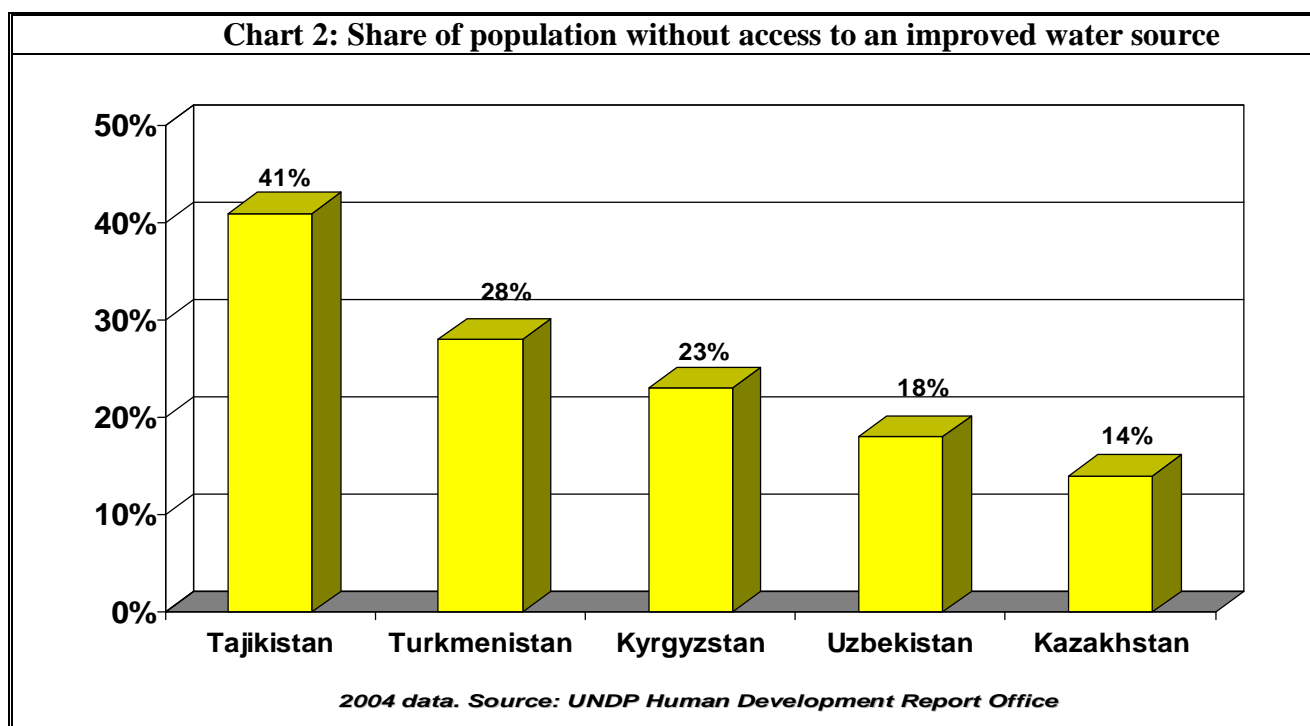
Chart 1: Per-capita water consumption in Central Asia, other countries



*In cubic metres per annum. From various years, 1998-2007.
Source: (<http://www.fao.org/nr/water/aquastat/dbase/index.stm>)*

Agricultural reform: Central Asian agriculture depends heavily on irrigation. While irrigation reduced the impact of the drought of 2008, it also puts agriculture at the centre of Central Asia's water-energy tensions. Still, the extent and patterns of irrigation are not uniform across the region. Since only 30-50% of Tajikistan's wheat crop is irrigated, the impact of the drought will likely be greater there than in Uzbekistan, where most of the crop is irrigated.⁴⁸ However, the continuing predominance of outdated, ineffective water management mechanisms (including over-irrigation), inefficient agronomic techniques, and the decapitalisation of irrigation and drainage infrastructures during the past decades result in exceptionally inefficient water use. As the data in Chart 1 above show, even in "upstream" Tajikistan and the Kyrgyz Republic, per-capita water use is many times greater than in neighbouring countries, as well in other countries with similar aridity, topographical, and per-capita GDP levels.

Central Asia's high water consumption levels are not due to household consumption: as Chart 2 shows, millions of Central Asians do not enjoy access to improved water sources. Instead, it is due to extremely inefficient irrigated agricultural practices. World Bank research indicates that some 79% of Central Asia's irrigated water is lost (mostly in unlined intra- and inter-farm canals), compared with loss levels of around 60% in developing countries overall (World Bank, 2004). Other researchers (Savoskul *et al.*, 2003) have estimated that the share of Central Asia's arable land affected by salinisation and water logging has increased during the last decade from roughly 25% to 50% of irrigated land, results in crop yield decline by 20-30%. While the most affected areas seem to be in downstream Uzbekistan (e.g., Kaskadarya) and Turkmenistan (the Achalon and Mary provinces), these problems are not unknown in Tajikistan and the Kyrgyz Republic.



⁴⁸ This is why the USDA has forecast a 25% reduction in the 2009 winter wheat harvest for Tajikistan, but only a 3% reduction for Uzbekistan.

Central Asia's wasteful water management practices need to be combated at a number of levels. Many of these—such as the redesign and improved maintenance of key national and sub-national irrigation systems—can only be accomplished by central governments. But other parts of the problem can be solved by allowing market forces to play a stronger role in water allocation and use. Movements away from centralised control over agricultural production and support for the cotton monoculture, permitting farmers greater latitude in deciding what to plant and where to sell their crops (and at what prices), removing barriers to community investments in water reclamation, micro-hydro plants, or alternative energy technologies—this can go a long way toward reducing water used per dollar of farm output produced. Policies to support the commercial introduction of drip-irrigation, rain-water capture and other water-saving technologies could also go a long way. Longer-term solutions such as these to address Central Asia's chronic developmental challenges in the water area may also, in the final analysis, be the best response to the region's water security needs.

VI—Government and international community responses: Lessons learned

Introduction

This assessment does not seek to provide a detailed accounting of the responses to the intertwined threats to water, energy, and food security undertaken by the governments of Tajikistan and the Kyrgyz Republic and international community. While much of the focus in the following pages is on UN disaster response and early recovery mechanisms, this emphasis is not meant to suggest that these are the sole—or even the most important—aspect of the response. This section seeks to provide a short overview of these activities, with a particular focus on lessons learned. (Readers interested in more detailed treatment of these issues are referred to Appendixes A and B). This section is divided into three sections, reflecting different activities and issues present along the disaster prevention → humanitarian/emergency response → early recovery → development continuum. It does not claim to be relevant for all international agencies working in these countries. Instead, the focus is on those questions and activities most important for the United Nations, particularly as concerns donor coordination issues. This focus is meant to promote capacity development for the appropriate national counterparts, among state and civil society organisations.

Emergency response: The UN appeals

Three UN appeals have been launched since the 2008 winter crisis: flash appeals by both Tajikistan (in February 2008) and the Kyrgyz Republic (in December 2008); and the September 2008 food security appeal (in Tajikistan). The details of these are presented in Box 1, and in Tables 5 and 6.

Box 1: Tajikistan's February 2008 flash appeal⁴⁹

To address the energy crisis:

1. Assure adequate electrical power and water for critical health care services and mass-care facilities.
2. Assure minimally adequate supplies of water for urban populations.
3. Assure adequate access to heat, water, food and other basic commodities for vulnerable urban populations.

To address the food crisis:

4. Increase food supplies through direct assistance.
5. Increase the economic means to acquire food.

To address the possibility of extensive flooding:

6. Reinforce capacity to warn of flood and landslide events.
7. Increase in-country capacity to provide critical shelter and livelihoods commodities following floods/landslides.

⁴⁹ The flash appeal was revised in May 2008, but neither the overall sum requested (\$26 million) nor the timeframe (February – August 2008) were altered. The main change was to focus on the spring locust infestation.

Important lessons emerging from these appeals include the following:

- ***Significant investment is needed in humanitarian preparedness in Central Asia.*** The experience of the UN country team (UNCT) in Tajikistan during the winter crisis can be described as an understaffed UN presence working in a remote, isolated country without sufficient humanitarian/disaster management expertise, in a crisis situation whose peculiarities required that the UN emergency response/humanitarian machinery think “outside the box” to design and implement non-standard solutions. Irrespective of how the success of this emergency response is assessed, it underscores some weaknesses in the conceptual and institutional frameworks that inform the work of the international community in countries like Tajikistan. Improvements in the international community’s ability to effectively respond to compound crisis conditions in such countries require significant investments, both quantitative (in terms of human resources) and qualitative, particularly in terms of OCHA training in UN humanitarian reform systems and instruments, but also in terms of OCHA’s ability to adapt these systems and instruments to non-standard crisis situations.

Table 5: Tajikistan’s September 2008 food security appeal⁵⁰			
<i>Sector</i>	<i>Needs identified</i>	<i>CERF approved grants</i>	<i>Unmet needs</i>
Agriculture	\$13,616,842	-	\$13,616,842
Coordination + support services	\$580,154	-	\$580,154
Food	\$17,796,000	\$1,610,800	16,185,200
Health	\$2,753,559	-	\$2,753,559
TOTAL	\$34,746,555	\$1,610,800	\$33,135,755

- ***Emphasis on food appeals:*** The joint *Food Security Assessment* conducted in the first half of 2008 by FAO, WFP and UNICEF concluded that some 2.2 million people in Tajikistan are experiencing food insecurity; 800,000 of these were found to be severely food insecure, and in need of immediate assistance. In the Kyrgyz Republic, the flash appeal developed by the government and the UNCT found that some 1 million people were vulnerable to higher food (and energy) prices. These appeals underscore the humanitarian community’s expertise in, and predisposition toward, food security work. Additional FAO and WFP investments of human and programming resources in Central Asia would therefore be most helpful.
- ***Energy—largely outside the appeals process:*** The 2008 winter crisis in Tajikistan was precipitated by chronic development shortcomings in the energy sector;⁵¹ many of these shortcomings are now apparent in Kyrgyzstan as well. During the crisis, donors and government agencies scrambled to arrange emergency procurements of fuel, generators, and the like. However, most of these activities happened outside the appeals process. Some of them—such as the attempted joint UNDP-World Bank mazut (heavy fuel oil)

⁵⁰ Compiled by OCHA on the basis of information provided by the appealing organisations. As of 19 September 2008. As of 8 December 2008, activities valued at \$9.1 million (26% of the total appeal) had been financed, mostly with US funding. For more information, see <http://www.reliefweb.int/fts>.

⁵¹ The World Bank’s 2004 *Tajikistan Household Energy Survey* found that rural households in Tajikistan typically received only seven hours of electricity per day during the winter time.

procurement—were not completely in a timely manner.⁵² This was in large part because the humanitarian appeals process is not really set up to address energy issues. This underscores the importance of developing emergency procurement procedures for non-food items like heavy fuel oil, irrespective of whether or not these procurements come under the formal UN emergency response framework.

Table 6: Kyrgyz Republic—Flash appeal⁵³			
<i>Sector</i>	<i>Full requirements</i>	<i>Needs met</i>	<i>Unmet requirements</i>
Child protection/education	\$714,000	\$114,674	\$599,326
Coordination	\$210,000	\$0	\$210,000
Food security	\$10,900,000	\$1,750,405	\$9,149,595
Health	\$4,916,780	\$0	\$4,916,780
Shelter	\$907,668	\$149,122	\$758,546
Water, sanitation, and hygiene	\$2,986,815	\$4,815	\$2,982,000
TOTAL	\$20,635,263	\$2,019,016	\$18,616,247

Whereas some 57% of Tajikistan’s February 2008 flash appeal was ultimately funded by donors, the financing of the September 2008 food security appeal, and of the Kyrgyz Republic’s December 2008 flash appeal, remains much more modest.

Longer-term response: National development strategies

The roots of Tajikistan’s humanitarian emergency during the winter 2008, and the roots of the energy insecurities now facing the Kyrgyz Republic, lie in the challenges facing these countries’ energy and water sectors. Addressing these challenges requires that governments (and the international community) go beyond short-term disaster management paradigms and couch the response in appropriate medium- and long-term perspective. The Poverty Reduction Strategy (PRS) in Tajikistan, and the Country Development Strategy (CDS) in Kyrgyzstan, offer the key policy frameworks for such a response. These documents can also be linked to key planning and programming instruments used by the international community, namely the Joint Country Support Strategy (JCSS) and the UN Development Assistance Framework (UNDAF).

Both the CDS and NDS call for the partial liberalisation and privatisation of the energy sector, to rationalise energy demand, introduce competition where possible, and finance the investments needed to reverse the de-capitalisation of the energy infrastructure. They also call for an expanded role for alternative energy, and further agricultural reforms, in order to reduce unsustainable water use. However, smaller-scale, alternative energy technologies are unlikely to expand significantly if this task is left up solely the monopolies that dominate national energy sectors. Legal, institutional, and managerial frameworks need to be adapted to support networks of

⁵² In contrast, procurement and distribution activities in the food security area were more successful, due to the work of WFP.

⁵³ As of 16 December 2008.

smaller, alternative energy producers. Likewise, as these documents do not have strong monitoring and evaluation frameworks, and are not directly linked to the short-term operational documents that have guided the government response to the energy, food, and water insecurities in Tajikistan and the Kyrgyz Republic, their short-term significance may be limited.

Table 7: Strategic planning documents in Tajikistan		
<i>Strategic document</i>	<i>Time frame</i>	<i>Lead agency(s)</i>
Poverty Reduction Strategy II	2007-2009*	Government, World Bank, IMF
National Development Strategy	2005-2015	Government
UN Development Assistance Framework	2004-2009*	United Nations
Joint Country Support Strategy	2008-2010	Asian Development Bank, DFID, EBRD, European Commission, Germany, SDC, SIDA, United Nations, USAID, World Bank

* *Successor document now under preparation.*

Instead, as is shown in Tables 7 and 8, these strategic documents, and their accompanying UNDAFs and JCSSs, are now undergoing revision or will soon do so. This offers governments and the international community the opportunity to refashion long-term development visions, and the policies and resources needed to support them, in order to address water, energy, and food insecurities.

Table 8: Strategic planning documents in the Kyrgyz Republic		
<i>Strategic document</i>	<i>Time frame</i>	<i>Lead agency(s)</i>
Country Development Strategy II	2007-2009*	Government, World Bank, IMF
UN Development Assistance Framework	2005-2010	United Nations
Joint Country Support Strategy	2007-2010	Asian Development Bank, DFID, EBRD, European Commission, Germany, SDC, SIDA, United Nations, USAID, World Bank

* *Successor document now under preparation.*

Early recovery⁵⁴

Early recovery activities fall into the space between emergency/humanitarian disaster response (intended to address immediate post-crisis threats to human welfare and security) on the one hand, and longer-term development activities (which seek to address chronic, development-based threats to welfare and security) on the other. Early recovery activities should ideally be designed so as to strengthen programmatic linkages between emergency and the development responses, helping to smooth the post-crisis transition from one stage to the other. As many donors that finance development activities are unwilling to provide significant funding for crisis prevention activities, early recovery may prove an appropriate framework for partnership and resource mobilisation opportunities that can not otherwise be easily accommodated.

In particular, early recovery activities should seek to link emergency/humanitarian relief activities to longer-term community support programming (by government and international agencies) in health and disaster management, thereby helping to address the underlying causes of

⁵⁴ This section draws on Brian Donaldson “Early Recovery Framework for Tajikistan”, UNDP-Tajikistan, November 2008.

vulnerability to disasters. In Tajikistan, for example, early recovery could be supported by the designation of early recovery focal points in each of the REACT sectors/clusters.

Table 9: Actual and potential early recovery and disaster response activities in Tajikistan and the Kyrgyz Republic⁵⁵	
<i>Food security, livelihoods and income support</i>	<ul style="list-style-type: none"> • Micro- and small-enterprise recovery through short-cycle business-management training, cash grants, access to microfinance schemes; • Labour intensive construction and infrastructure rehabilitation work; • Support for agriculture and livestock; • Introducing family greenhouses, school gardens
<i>Shelter and infrastructure reconstruction</i>	<ul style="list-style-type: none"> • Restoring small-scale infrastructure (e.g., road, culvert, school, water and sanitation infrastructure repair); • Identifying alternative/affordable building technologies for reconstruction (e.g., insulation kits and compressed bricks for schools, hospitals); • Providing technical assistance (including the development of training and promotional materials) concerning seismically resilient spontaneous (re)construction techniques, especially for women and vulnerable groups; • Providing training in residential construction, maintenance skills; and • Increasing financing (e.g., via block grants) to support small-scale reconstruction activities undertaken by community organisations (especially women and vulnerable groups)
<i>Disaster risk reduction</i>	<ul style="list-style-type: none"> • Strengthening early warning, communication systems • Designing, implementing community-based disaster risk reduction trainings; • Supporting community risk assessment activities; • Training volunteers for disaster preparedness and response; • Constructing avalanche shelters; and • Supporting household flood mitigation activities
<i>Energy</i>	<ul style="list-style-type: none"> • Supporting the design, installation, and maintenance of community managed mini-hydropower stations, and biofuel and solar energy equipment, particularly in outlying and vulnerable communities; and • Subsidising the procurement, installation, and maintenance of fuel efficient stoves, solar hot water heats, and the like
<i>Environment</i>	<ul style="list-style-type: none"> • Providing technical assistance for policy makers responsible for building codes, and the planning and development of sectoral projects; • Financing the restoration of ecologically vulnerable or damaged areas, especially in land/mud slide prone areas; • Supporting the restoration of greenbelt areas via the introduction of appropriate seedlings and seeds (e.g., community-based nurseries, grasses for fodder and soil stabilisation)
<i>Water</i>	<ul style="list-style-type: none"> • Providing technical assistance to policy makers in order to improve watershed and sustainable land management in remote, environmentally degraded areas; and • Supporting water user associations

⁵⁵ Whereas early recovery activities have been formally introduced in Tajikistan, this is not yet the case in the Kyrgyz Republic.

While the early recovery paradigm has so far not been robustly applied to Central Asia, this could change. The UN country team in Tajikistan is considering designating early recovery focal points in each of the REACT sectors/clusters, to be coordinated by an early recovery officer. The design of an early recovery conceptual framework, *inter alia* to support Tajikistan's draft disaster prevention strategy, is being discussed within the UNDAF process. Examples of the types of activities that could be supported under this framework are provided in Table 9.

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Appendix A—Government responses

Overview

While both governments have responded to the threats to water, energy, and food securities present in their countries, the response (which has taken the form of national action plans)⁵⁶ has focused primarily on increasing energy supplies and preventing the (re)appearance of humanitarian crisis. Their responses to the longer-term development drivers behind the compound crisis have in principle been couched in their national development strategies, which ostensibly set the overall framework for socio-economic policy and donor support.

The national action plans focus primarily on stockpiling fossil fuels, raising energy and water tariffs and collection rates, repairing damaged infrastructure, increasing electricity capacity (where possible), and obtaining additional electricity and gas imports. On the demand side the focus has been on administrative electricity rationing: in the Kyrgyz Republic, planned blackouts were in place from March 2008 through mid-June, and were then re-imposed in August, as the severity of the unfolding water shortfall at Toktogul became clear. On 7 October, the Government announced that power cuts would continue until the start of the heating season in November, and be extended to 12 hours per day in most provinces, 15 hours per day in Batken province, and 10 hours per day in Bishkek. (In the event, the blackouts have not always followed the appointed schedule.) School vacations were extended from 25 December 2008 through 1 March 2009, to shut down those schools (some 1117 out of 2111 total) that heat with electricity and to install coal-heating systems.⁵⁷ In all of Tajikistan's provinces except for Dushanbe, households only have access to electricity provided by Barqi Tojik during 3.30 – 7.30 and 17.30 – 20.00. For other users (businesses, schools, hospitals) access is even more reduced—unless they have their own generation systems. While the government in November 2008 was able to increase the provision of electricity to eight hours a day for towns and settlements, these improvements were jeopardised by the new restrictions introduced in late January, due to the absence of electricity imports from Turkmenistan transmitted across Uzbekistan.

In collaboration with World Bank and the European Commission (EC), the Kyrgyzstani authorities are increasing financing for the country's two main social protection programmes: the

⁵⁶ On 9 February 2008, the government of Tajikistan approved the *Action Plan to Mitigate the Emergency in the Energy Sector*, containing a number of short-term measures aimed at overcoming the winter/energy crisis. The plan called for the rationalisation of energy use, repair of damaged infrastructure, replenishment of fossil fuel stocks for power plants, and increasing electricity and gas imports from neighbouring countries. This was followed in May 2008 by the *Action Plan on Timely Preparations for Uninterrupted and Efficient Operations during Autumn-Winter 2008-09*. While the February plan only focused on the energy sector, the May plan had a broader perspective and integrated water and sanitation and agriculture issues. Following the lessons from their southern neighbour, the Kyrgyzstani authorities passed two decrees focusing on winter preparations. The first was passed on 9 April 2008 (N° 135), "On measures for the accumulation of necessary volume of water in Toktogul Reservoir and on the preparedness of sectors of economy and the people of the Kyrgyz Republic for autumn-winter period of 2008-2009". This dealt exclusively with measures to deal with the energy shortfall in the country. On 31 July 2008, another decree was passed (N° 415), "On results of socioeconomic development of the Kyrgyz Republic during the first six months of 2008 and measures for stabilisation of macroeconomic situation and maintaining the rate of economic growth". This second decree outlined short-term measures for food and energy security, and social, money and credit, and budget and tax policies. This decree also outlined some medium-term measures, mainly focusing on the financial and energy sectors. In total, 64 measures focused on the country's energy sector, before the 2008-2009 winter.

⁵⁷ While children will make up classes during the summer, the production and distribution of educational materials and television programming to will help children learn during their extended holidays could be an important area for expanded donor support.

unified monthly benefit (UMB—the main safety net targeted to poor families with children), and the monthly social benefit (MSB), which targets categorical groups (e.g., the disabled, orphans, elderly). The World Bank is providing the financing needed to top up the UMB by 30% for ten months from October 2008, at a cost of \$5 million. The EC is likewise planning to provide €5 million to top up the UMB and MSB for 12 months in 2009, in order to mitigate the impact of food price shocks and protect consumption (especially of foodstuffs). This assistance would help address the food insecurity resulting from the inflation of the past two years.

Some important interventions, such as the distribution of wheat seed by the Ministry of Agriculture in Tajikistan, are being implemented outside the plan of action, increasing the potential for poor coordination among and between government agencies and donors. In particular, three main wheat seed distribution programmes—one funded by the Ministry of Agriculture (1,300 metric tons), one funded by the World Bank and implemented by FAO (1,300 metric tons), and one supported by USAID and implemented by WinRock International (600 metric tons)—operate with different modalities. The first is a loan, the second is based on free distribution, and the third sells the seeds 15% below the market price.

Energy sector: How effective are the measures taken?

Kyrgyz Republic: The extent of the problem facing the government is apparent in First Deputy Prime Minister Iskenderbek Aidaraliev's late-September announcement that the country's electricity consumption during November 2008 – March 2009 must be limited to 5.2 billion kilowatt hours.⁵⁸ As the Kyrgyz Republic's electricity consumption in 2008 seems to have been in the neighbourhood of 13 billion kilowatt hours and since electricity demand during the November-March period typically comprises about half this figure, an electricity shortfall of some 1.0-1.5 billion kilowatt hours is suggested for this period alone. The gap between demand and supply is exacerbated by extensive losses within the electricity system, which in 2006 were estimated at 42% of total electricity distributed (or 4.9 billion kilowatt hours).⁵⁹ Some 13% were ascribed to technical losses; the remaining 29% were "unaccounted".

The government drafted indicative monthly limits for national electricity consumption, with targets for economies assigned to different classes of users (e.g., 30% reductions for industrial enterprises). So far, at least, these indicative limits do not seem to have been closely followed. According to the Ministry of Industry, Energy, and Fuel, during the 26 August – 30 September period electricity consumption in the country totalled 417 million kilowatt hours, while the limit of 291 million kilowatt hours.⁶⁰ Other administrative measures, such as the rolling blackouts or plans to cut three-phase electrical connections, increase the stress on the country's aging infrastructure.

Significant increases in electricity tariffs in such circumstances may well be inevitable—especially since, prior to 2008, electricity rates had not changed for five years. During that time imported gas prices went up ten times, and the price of coal also increased. According to World Bank experts, an average electricity tariff of \$0.04-\$0.05/kWh would be needed to rationalise demand and provide the resources needed to repair dilapidated infrastructure.⁶¹ According to a

⁵⁸ AKIpress, 30 September 2008, <http://kg.akipress.org/news/62021> (last accessed 30 September 2008).

⁵⁹ The average exchange rate for 2006 was \$1 = 40.149 som. Data taken from CIA World Factbook 2008, <https://www.cia.gov/library/publications/the-world-factbook/geos/kg.html> (last accessed 11 October 2008).

⁶⁰ AKIpress, 2 October 2008, <http://kg.akipress.org/news/62125> (last accessed 2 October 2008).

⁶¹ 24.kg, 8 October 2008, "Raghuveer Sharma: Odná prichin chrezvychainoi situatsii v energosektore Kyrgyzstana – plokho upravlenie gidroresursami" [Raghuveer Sharma: One reason for the emergency situation in Kyrgyzstan's

government resolution adopted in April 2008, electricity tariffs should rise toward this level by 2012. On the other hand, the significant increases in electricity tariffs as shown in Table 10 could magnify energy insecurity issues. A USAID study found that average monthly household electricity bill in 2007 was 175 som (\$4.63), or roughly 5% of the average monthly salary for industrial workers.⁶² This share rises to 14% for those engaged in agriculture, and to 19% for pensioners. For many Kyrgyzstani households, higher electricity tariffs could mean increased deprivation—particularly if they do not lead to rapid improvements in the reliability of electricity supply.⁶³ If, for example, electricity charges absorb 19% of pensioners’ incomes, then the 138% cumulative increase in household electricity tariffs planned for 2008-2012 (see Table 10) would *ceteris paribus* reduce pensioners’ real incomes by some 21%.

Table 10: Anticipated electricity tariff increases in the Kyrgyz Republic⁶⁴							
<i>User group</i>	<i>Date of tariff increase</i>						<i>Cumulative increase</i>
	<i>Pre-July 2008</i>	<i>July 2008</i>	<i>April 2009</i>	<i>April 2010</i>	<i>April 2011</i>	<i>April 2012</i>	
Households	\$0.016	\$0.018	\$0.022	\$0.026	\$0.031	\$0.037	138%
Industrial enterprises	\$0.020	\$0.025	\$0.030	\$0.033	\$0.037	\$0.041	108%
Agricultural enterprises	\$0.020	\$0.025	\$0.028	\$0.032	\$0.037	\$0.043	117%
Pumping stations	\$0.015	\$0.017	\$0.021	\$0.024	\$0.029	\$0.036	137%
Budget-funded organisations	\$0.019	\$0.026	\$0.031	\$0.037	\$0.045	\$0.051	167%
Other users	\$0.019	\$0.026	\$0.031	\$0.038	\$0.046	\$0.054	184%

The government has also sought to increase energy imports. Under the 10 and 18 October regional cooperation agreements, Kazakhstan is to provide Kyrgyzstan with 250 million kilowatt hours of electricity and guarantee the “timely” delivery of coal for the Bishkek Power Station in 2009. Uzbekistan is to guarantee the “additional supply” of 150 million cubic meters of gas to Kyrgyzstan during the first quarter of 2009. In return, Kyrgyzstan committed to release 5.25 billions of cubic meters of water from Toktogul for irrigation purposes, thereby ensuring that the amount water available “at the beginning of the vegetative period in 2009 will not be inferior to 2008”.⁶⁵ Official government statements during the autumn also report good progress in stockpiling winter stores of coal and mazut (which likewise come predominantly from imports).

It is too early to tell whether these imports will prove sufficient to offset Toktogul’s dwindling hydropower resources. However, Kyrgyzstani energy companies seem unlikely to be able to import coal, gas, or electricity at prices that would allow them to break even on the domestic resale at the prices shown in Table 10 above. According to some sources, electricity imported from Kazakhstan costs \$0.07-\$0.08/kWh.⁶⁶ Likewise, whereas Uzbekistani suppliers charged \$100 per 1,000 cubic metres of gas in 2007 and \$145 in 2008, this price has risen to \$240 in 2009 (for

energy sector is bad hydro-resource management], <http://www.24.kg/economics/2008/10/08/94649.html> (last accessed 9 October 2008).

⁶² This figure is based on 2006 average monthly wages. Data from National Statistical Committee. This is \$81.45 per month.

⁶³ REMAP, p 11, op cit.

⁶⁴ Price per kilowatt hour. Data are from the 23 April 2008 government resolution “On Medium-Term Electricity Tariff Policy for 2008-2012” (No. 164); UNDP calculations.

⁶⁵ Kazinform, 20 October 2008, “Podpisan protokol ob ispol’zovanii vodno-energeticheskikh resursov tsentral’no-aziatetskogo regiona” [Protocol signed about use of water and energy resources in Central Asia], <http://www.inform.kz/index.php?lang=eng> (last accessed 18 November 2008).

⁶⁶ CARRA interview, Bishkek, 9 October 2008.

exports to Tajikistan as well as to the Kyrgyz Republic). This will have a significant impact on the Kyrgyz Republic's external position: the December 2008 IMF report notes that "Natural gas imports will be about \$130 million (2½ percent of GDP) higher in 2009 than in 2008 due to higher prices."⁶⁷

Although important, these measures run the risk of diverting attention from the longer-term challenges of restructuring and modernising the Kyrgyz Republic's energy sector. While the Bishkek Thermal Power Station (which provides the capital with heat and electricity) has a design capacity of 650 megawatts, it is currently unable to generate more than 250 megawatts. Attempts at privatising the plants collapsed this summer: potential buyers balked at the government's price of \$350 million.⁶⁸ Prospects may be better in the gas sector: Gazprom is negotiating the acquisition of 75% of the shares of KyrgyzGas, the national gas supplier.⁶⁹ A memorandum of understanding was signed on 9 October by Gazprom and the Kyrgyz Republic's Ministry for Industry and Energy; a three-month period has been set aside to finalise the terms of the deal (including the price Gazprom would pay).⁷⁰ In light of the difficulties Gazprom is facing in financing the development of new gas fields during the global economic crisis, it remains to be seen whether Gazprom will take on the challenge of restructuring the Kyrgyz Republic's gas sector.

If correct, the above analysis must be a source of concern. At a time when water levels at Toktogul are nearly 40% below historical averages, electricity consumption is exceeding indicative limits, alternative sources of energy have not yet been fully secured, and prospects for modernising the energy sector seem uncertain at best. Although rehabilitation works were conducted this year in all areas of the energy sector, such measures as rolling blackouts and increased loads on single-phase connections carry with them a greater possibility of wearing down equipment and technical faults. All that seems certain is that Kyrgyzstani households and companies will face rising energy prices, and insecurity, in the months ahead. Moreover, the pressures on Toktogul's resources could further reduce the water available for irrigation in the spring and summer of 2009.

Tajikistan: As in the Kyrgyz Republic, the energy response in Tajikistan has focused on reducing consumption, improving generation and transmission capacities (through repairs and new infrastructure), improving tariff collection, and particularly on securing additional energy imports.⁷¹ The implementation of the October regional cooperation agreements is therefore quite important for Tajikistan, as delays in the delivery of these imports place additional strains on water levels at Nurek. According to Barqi Tojik officials, in the absence of anticipated electricity and gas imports, the hydropower reserves at Nurek would be exhausted in February. While electricity imports from Turkmenistan began on 1 November, the agreement reached was for the purchase of 1.2 billion kilowatt hours, instead of the planned 2 billion kilowatt hours.⁷² Likewise, according to officials TajikGas (Tajikistan's gas importer), 2008 deliveries from Uzbekistan ran below expectations, due

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⁶⁸ AKIpress, 26 September 2008, http://www.akipress.com/en_news.php?id=29491 (last accessed 3 October 2008). For more on the government's attempt to implement a rapid privatisation policy, see International Crisis Group, "Kyrgyzstan: A Deceptive Calm", Asia Briefing N° 79, 14 August 2008.

⁶⁹ AKIpress, 9 October 2008, http://www.akipress.com/en_news.php?id=29694 (last accessed 9 October 2008).

⁷⁰ Kyrgyzstan Mull Risks of Russian Gas Deal, IWPR, Reporting Central Asia No. 555, 11 November 2008.

⁷¹ Whereas 25-30% of Tajikistan's electricity consumption needs are met from imports (principally from Turkmenistan and Uzbekistan), 98% of Tajikistan's gas consumption is met by imports from Uzbekistan. According to Tajikistan's May 2008 Action Plan, 300 million cubic metres of imported gas are needed for Dushanbe central heating network.

⁷² Source: MoE Report of November 08 concerning the status of implementation of the May 2008 Fall-Winter preparedness plan (*Measure 41*).

in part to the \$2.3 million in debts that TajikGas owes to UzTransGas (Uzbekistan's gas exporter).⁷³ Matters are further complicated by the arrears to TajikGas that have accumulated with Barqi Tojik (\$1.445 million) and the Tajik Cement Company (\$1.6 million); prospects for settling these arrears seem uncertain. In any case, increases in the price of gas imported from UzTransGas—to \$240 per 1,000 cubic metres in 2009, up from \$145 in 2008 and \$100 in 2007—seem likely to exacerbate problems of energy security and affordability for many households in Tajikistan.

Despite the progress made since the winter of 2008, Tajikistan continues to suffer from electricity shortages, reflecting Tajikistan's chronic development challenges in the energy sector. In rural areas (except for Gorno Badakhshan), households only have access to electricity (provided by Barqi Tojik) during 6.00 – 9.00 and 17.30 – 21.30 daily.⁷⁴ Access is further reduced for other users (businesses, schools, hospitals—unless they have their own generators). On the other hand, Dushanbe and other urban areas have by and large avoided power cuts (of above-normal severity). Likewise, the government seems interested in preventing the “electric shock” from producing further declines in industrial output: imports from Turkmenistan are intended to supply the TALCO Aluminium Company with the electricity it needs. As TALCO accounts for some 45% of Tajikistan's electricity use, these imports will reduce the amount of water used in Nurek by TALCO. (The government's May 2008 action plan calls on Tajikistan to import 2 billion kilowatt hours of during the winter of 2008-2009 solely to cover TALCO's needs). In contrast to the Kyrgyz Republic, however, the government in Tajikistan has been able to significantly increase electricity generation capacities in 2008 by bringing three new units at the Sangtuda-1 hydropower plant on-line—allowing Barqi Tojik to provide an additional hour of electricity per day to regions outside of Dushanbe.

Also as in the Kyrgyz Republic, the emphasis in Tajikistan is on infrastructure repair and refurbishment, and on procurement of additional fuel supplies. Barqi Tojik has procured 20,000 metric tons of low-sulphur residual fuel oil (mazut), in addition to the approximately 10,000 metric tons of mazut already stockpiled in Dushanbe, for emergency use in case of a break in natural gas supplies or loss of other electrical generation capacity.

These numbers reflect improvements made and lessons learned from the winter of 2008. However, the results of the UN rapid assessment conducted in early October⁷⁵ suggest that a great deal still remains to be done (see Table 11). For example, 74% and 68% of the surveyed schools and health care facilities (respectively) didn't have a stove or a heating system; 64% of schools did not have a working water supply system.⁷⁶ These data raise questions about the extent of winter preparations, as well as underscoring the chronic nature of problems of access to education and social services in Tajikistan. They also remind us that longer term, sustainable solutions to Central Asia's development challenges are the best methods for preventing humanitarian crises.

In light of last winter's developments in Tajikistan, the emphasis on procuring short-term supplies is understandable. However, international experience shows that price increases via the

⁷³ Shavkat Shoimov, the deputy director of the Tajik state natural-gas distributor Tojikkaz, told *Asia Plus* in November 2008 that “since the beginning of this year [2008], Tajikistan has received little more than 410 million cubic meters of natural gas from Uzbekistan. However, Tajikistan should have received 483 million cubic meters of Uzbek natural gas over the report period, however, Uzbekistan has cut natural-gas shipments due to Tojikkaz's debt”. (Source: “Tajikistan receives little more than 410 mln c.m. of Uzbek natural gas this year so far”, *Asia Plus*, 7 November 2008).

⁷⁴ Source: “Electricity supplies to regions increased”, *Asia Plus*, 7 November 2008.

⁷⁵ Rapid Multi-Cluster Assessment, Winter Preparations and Dry Weather Impact, Preliminary Results, Presentation of 24 October 2008, UNDP-Tajikistan (Disaster Risk Management Project).

⁷⁶ *Ibid.*

introduction of time-of-day pricing and graduated tariffs (whereby large energy consumers pay much more per unit of energy consumed than small users) can increase revenues for energy providers and significantly reduce energy consumption, while ensuring that low-income users do not bear the brunt of the higher tariffs. (The same arguments can be applied to water and sanitation services.) For such measures to work, however, energy (water) use must be measured via the quasi-universal introduction, and effective monitoring, of meters. Information campaigns to explain how low- and middle-income households can change their behaviour to minimise the impact of higher tariffs could likewise be introduced and expanded. Unfortunately, significant acceleration of the existing metering programmes does not play a prominent role in the governments' response to the prevailing energy insecurities. The focus on addressing immediate energy insecurities may also preclude consideration of reform measures that could encourage relatively low-cost energy supply responses (e.g., micro-hydro projects). Without a greater focus on demand-side reforms and measures to promote longer-term supply response, the decapitalisation of energy sector assets will continue, as will large systemic losses—increasing future energy vulnerability.⁷⁷

Table 11: Protection and vulnerability in Tajikistan*			
Questions; respondent groups	Answer		Sample size
	No	Yes	
Households			
Does your family have enough fuel on hand for the winter months?	69%	31%	845
- If no, does your family believe it can buy enough fuel for the winter?	95%	5%	548
Health care facilities			
Was electricity normally available in your facility during October 2007 – March 2008?	75%	25%	184
Does your facility have a generator?	63%	37%	184
Does your facility have stoves or other heating apparatuses?	68%	32%	184
Does your facility have a functioning water supply?	45%	55%	184
- If yes, does the system supply at least 60 litres of water per patient, per day?	46%	54%	184
Do UN, NGOs, or other development agencies implement projects in your facility?	76%	24%	184
Schools			
Is electricity normally available in your school during October – March?	74%	26%	210
Does your school have a stove or other heating apparatus?	74%	26%	210
Does your school have a functioning water supply?	64%	36%	207
Do UN, NGOs, or other development agencies implement projects in your school?	51%	49%	220
Water supply systems			
Does your community enjoy properly functioning water systems?	64%	36%	70
Has water availability in your community declined in the last four months?	48%	52%	66
Do community members have concerns about the quality of the water they consume?	45%	55%	66

* Data collected during 1-10 October 2008 by REACT-Tajikistan.

⁷⁷ On 14 January 2009, an accident ascribed to inadequate maintenance stopped electricity generation at the Kayrakkum hydro power station, which provides a third of the electricity consumed in Tajikistan northern Sughd province. The station was built in 1957; its renovation would cost an estimated \$25 million.

Medium- and long-term development measures

The roots of Tajikistan's humanitarian emergency situation during the winter of 2008, and the causes of the threats now facing the Kyrgyz Republic, lie in the structural fragilities affecting the governance of these countries' energy and water sectors. Addressing these challenges requires that governments and the international community go beyond short-term disaster management paradigms and couch the response in appropriate medium- and long-term perspective. The National Development Strategy (NDS) and Poverty Reduction Strategy (PRS) in Tajikistan, and the Country Development Strategy (CDS) in Kyrgyzstan, which were approved by the government in 2007, offer key policy frameworks for such a response. In addition to setting forth holistic responses to national development challenges that are aligned with fiscal and external constraints, these documents were designed with support from the donor community. As such, they are (or can be) linked to key planning and programming instruments use by the international community, namely the Joint Country Support Strategy (JCSS) and the UN Development Assistance Framework (UNDAF). These are the policy frameworks within which appropriate measures and support to reform the energy, agricultural, and water sectors should be designed, implemented, and financed.

Tajikistan: Although it is primarily of a short-term character, the 9 February 2008 Action Plan contains some elements of a medium-term response. These include measures to:

- rehabilitate and upgrade the generation units and controls systems at Nurek (thereby boosting production by some 5-15%);
- rehabilitate the domestic gas pipelines infrastructure in order to reduce losses (which run as high as 19%);
- establish a modern electricity dispatching centre; and
- implement an alternative energy programme, including small hydro.

Unfortunately, *most of these interventions are not included in the PRS and NDS*. The NDS (which covers the 2007-2015 period) and the PRS (for 2007-2009) are in principle Tajikistan's long- and medium-term strategic planning and programming instruments. While the NDS is a longer-term strategic document, the PRS is intended to serve as a medium-range socio-economic development programme for the country. In principle, both documents focus on aligning the principles of poverty reduction and sustainable development with macroeconomic stability, institutional reform, and economic growth. The NDS and PRS call for restoring and expanding Tajikistan's generation and transmission infrastructure in order to expand access to reliable electricity services and reduce production costs, *inter alia* by:

- (re)constructing the Rogun and Sangtuda-1 and -2 hydropower stations;
- introducing an expanded programme to construct small hydropower plants and promote new alternative energy sources (e.g., biogas, solar, wind power);
- developing the north-south electricity transmission grid in order to improve energy security in northern Tajikistan and export electricity to potential buyers in neighbouring countries with power deficits (e.g., Afghanistan, Pakistan, India);
- considering the reconstruction and expansion of coal-fired power plants;

- improving the management and transparency of the energy sector through restructuring Barqi Tojik (by spinning off generating plants into a separate company) as well as TajikGas; and
- raising tariffs (to \$0.025/kilowatt hour by 2010), in order to reduce losses and improve the sector's cash flow and profitability.

In the agricultural sector, the principal goals are raising gross agricultural output and labour productivity in order to reduce poverty, *inter alia* via:

- revising the land code, in order to ensure equal land use rights;
- drafting a national food security strategy;
- reforming the cotton sector by increasing competition among input suppliers and cotton-ginning plants, and by addressing farmers' debts;
- eliminating excessive interference by local authorities in decisions concerning which crops to grow;
- introducing transparent lending methods;
- improving the quality of veterinary, selective breeding and seed production services;
- renovating irrigation and drainage systems; and
- supporting the establishment of water users' associations.

In the social sector, the NDS and PRS call for:

- redressing the threats posed by demographic pressures combined with the underinvestment in education via major construction and renovation of school buildings. At least 450 new schools should be built and supplied with textbooks and learning materials, as well as heating and other equipment needed for proper gender friendly sanitary conditions, and safe drinking water;
- improving the availability and quality of medical services through the renovation of health care facilities, better provision of medical supplies, equipment, vehicles and medicines;
- the completion of reforms of the pension and social welfare systems, in order to improve the delivery of basic social services and better target the needs of vulnerable groups; and
- reforming the water supply, sanitation, communal services, housing, and housing construction sectors.

Kyrgyz Republic: The 9 April 2008 decree (N° 135) focuses exclusively on the energy sector. Only in the 31 July 2008 decree (N° 415) is any mention made of other sectors, and these have a more general character. As such, the connection to the overall development framework is even smaller than in Tajikistan.

The CDS outlines the Kyrgyz Republic's medium-term development vision, and describes the major directions of development activities for the 2007-2010 period (a draft of the new Country Development Strategy for 2009-2011 [CDS-2] was presented in September 2008). The CDS

identifies as priority sectors power generation and distribution, transport sector maintenance, construction, agriculture, and food processing.

The Kyrgyz Republic's energy sector is plagued by problematic management and a lack of transparency, high systemic losses and quasi-fiscal deficits,⁷⁸ tariffs that are below cost recovery rates, high reliance on imported fossil fuels, and a decapitalised energy infrastructure. The CDS therefore emphasises the sector's financial recovery, in order reach energy security by 2025—with a particular focus on hydropower. Specific activities include the:

- construction of the Kambarata-1 and -2 generating stations, *inter alia* via \$2 billion in investments from Russia;
- construction of 500 kV power lines to connect the Kyrgyz Republic's energy system with Tajikistan's (and thereby provide access to markets in Afghanistan and Pakistan), as well as the construction of a 500kV power line along the Kambarata-Kemin-Almaty route;
- partial privatization of the gas distribution and electricity generation (including the Bishkek thermal power station and the Bishkek thermal networks enterprises) and distribution systems, and their restructuring for competition;
- introduction of energy efficiency programmes in residential and commercial construction, as well as in the energy, agriculture, transport, and budgetary spheres;
- creation of conditions for the expansion of small hydro plants and other renewable energy technologies, as well as carbon finance; and
- development of the legal and institutional frameworks needed for these reforms to achieve their desired outcomes.

In the agricultural sector, the focus is on reducing rural poverty and improving environmental sustainability via rural development and stronger market links between the agricultural and food processing sectors. Specific reform measures to be introduced include the:

- design and implementation of large-scale food safety measures;
- further extension of the land reforms introduced in the 1990s, to promote the creation of agricultural cooperatives;
- development of agricultural extension services;
- increases in the volumes of agricultural credits;

The CDS-2 also calls for increases in food production, less reliance on food imports, and better management of the state food reserve. Grain stocks in the state reserve should not be permitted to fall below 123,000 tons—the volume corresponding to 90-day minimal population consumption norms. Although it is not mentioned, the government appears to want to convert all schools and health care facilities that heat with electricity into coal-based heating systems. The CDS

⁷⁸ Systemic losses of electric power in the networks exceeded 40%, about 25% of them fall for commercial losses and theft. As a result quasi-fiscal budget deficit in the electric power sector of 7.6% of GDP in 2005, 5.4% of GDP in 2006 and 4.9% in 2007. Electric power bills collection in 2006 amounted to 72.3% only and 86% in 2007. (CDS-1, 2007; CDS-2, 2008)

also focuses on increasing the effectiveness of social assistance through social policy reform and better targeting.

While the CDS emphasises short-term energy supply objectives, it does not clearly reflect issues associated with the provision of energy to social institutions (schools, health facilities); and it only marginally touches the provision of energy to remote areas of the country. Likewise, the results of the rapid food security assessment conducted in October 2008 by the World Food Programme strongly suggest that chronic food insecurity issues should be given priority in formulating the draft CDS-2.

Government response: An initial assessment

The above suggests the following concerning the response by the governments of Tajikistan and the Kyrgyz Republic to the threats that have appeared in their countries.

Programmatic frameworks: Basically consistent, but room for improvement. An examination of the national action plans, national development strategies, and donor coordination frameworks (e.g., UNDAFs, JCSSs) suggests that these are broadly complementary, but important inconsistencies are present. The most important of these pertain to action plan recommendations for actions of a medium-term character, recommendations that may not always be included in (or otherwise be consistent with) the national development strategies. Although the action plans in both countries were drafted after the approval of the NDS and CDS, they rarely make reference to the longer-term strategies. The new CDS in the Kyrgyz Republic, the new PRS in Tajikistan, and of the JCSS and UNDAFs in both countries, offer important opportunities in this respect.

The humanitarian response-energy sector disconnect. The action plans focus primarily (almost exclusively) on the energy sector—an area in which the humanitarian community has little expertise. Instead, the donor community’s energy sector expertise is largely concentrated in the World Bank, whose cooperation with the UN’s humanitarian mechanisms has a sometimes spontaneous character. In Tajikistan, the government’s short-term disaster prevention activities should ideally play a larger role in guiding the humanitarian community’s preparedness and response plans. In order to do this, the work of the government agencies that are tasked with coordinating humanitarian and disaster response assistance would need to be better aligned. For example, the CoES should be member of the other coordination structures. Likewise, the REACT coordination platform should be either fully endorsed by the Tajikistani authorities, or a superior replacement mechanism be quickly identified and implemented. In the medium-term, since both the government’s (CDS/NDS) and international community’s (UNDAF, JCSS) programming documents are now undergoing reformulation, important opportunities for improving coordination within and between the donor community and government agencies are now present.

Re-prioritise policy frameworks based on “compound crisis” risks. While the CDS and PRS provide a realistic framework for action, they sometimes have certain “wish list” characteristics, apparent *inter alia* in the approval of large projects with significant funding gaps. Subsequent prioritisation exercises are typically required. The imperatives of addressing the short-term humanitarian and medium-term development risks offer a good framework for conducting this prioritisation. Issues associated with food, water, and energy security and the reforms to strengthen the institutions managing these sectors should be given a more prominent place in these documents.

Energy sector reform: Small is beautiful. Both Tajikistan and the Kyrgyz Republic view the expansion of their hydropower generation capacities—via the construction or expansion of large dams (e.g., Rogun, Kambarata)—as central to their longer-term development prospects. Once completed, these projects would both remove the spectre of domestic energy shortfalls and allow for significant electricity exports. However, in light of their large capital requirements and long gestation periods, these projects will not provide relief to the energy insecurities that are currently plaguing both countries for some years. In the interim, smaller, more labour-intensive projects with lower capital requirements, shorter gestation periods, and greater employment-generation possibilities—in such areas as micro-hydro, biogas, solar, and other renewable energy technologies, but also in terms of energy efficiency projects (particularly in hospitals, schools, and other public buildings)—are much more likely to generate positive short- and medium-term results. The Tajikistani government’s January 2009 decision calling on the Ministry of Industry and Energy to ensure the construction of 50 additional small hydropower plants by end 2009 seems particularly important in this respect.

More robust energy sector reforms are needed. Both the CDS and NDS call for the partial liberalisation and privatisation of the energy sector, in order to rationalise energy demand, introduce competition into monopolised markets, and generate the internal and external finance needed to reverse the decapitalisation of the energy infrastructure. These measures should ideally be complemented by best practice reforms focusing both on the demand and supply side of the energy sector, in order to reduce energy insecurities while simultaneously shielding low-income households from the impact of the higher tariffs that must inevitably accompany measures to put the energy sector on solid footing.

Refocus social protection schemes on water and energy tariff hikes. In both the Kyrgyz Republic and Tajikistan, significant increases in the prices of electricity, heat, water, and communal services seem inevitable. These increases are an inevitable component of the energy sector reforms described above. However, the above analysis also indicates that, should government plans be realised, households in the Kyrgyz Republic may expect 138% increases in electricity tariffs during 2008-2002. Such an increase would *ceteris paribus* reduce the real income of pensioners by some 21%. Early efforts to refocus social protection schemes on those most vulnerable to these tariff hikes could pay large dividends—especially in countries where so many households are already living in poverty.

Appendix B—The international community’s response

Overview

Aid effectiveness and donor coordination, which is challenging in normal situations, can be particularly difficult in circumstances (like Tajikistan’s compound crisis) that have both development (e.g., inadequate agricultural and energy sector reform) and humanitarian (e.g., the need for emergency responses to dangerously cold weather conditions) dimensions. A number of principles and mechanisms have been established to address these coordination issues. The 2005 Paris Declaration on Aid Effectiveness emphasises national ownership and support for national capacity development as key donor coordination principles. The Hyogo framework (following the 2005 Kobe conference) emphasises the need to avoid artificial disconnects between emergency/post-crisis/humanitarian activities on the one hand and longer-term development programming on the other. The 2003 Good Humanitarian Donorship⁷⁹ initiative states that humanitarian assistance should support recovery and long-term development efforts. Joint country support strategies (JCSSs, for donors in a national setting) and the United Nations Development Assistance Framework (UNDAF, promoting the coordinated design [and, hopefully, implementation] of UN programming at the national level) are to provide more on-the-ground cohesion according to the global principles and mechanisms presented above.

Box 2: The Paris Declaration

The Paris Declaration on Aid Effectiveness⁸⁰ expresses the international community’s consensus on the direction for reforming aid delivery and management, in order to improve the effectiveness and results of development assistance. The Paris Declaration is grounded on five mutually reinforcing principles:

* *Ownership*: Partner countries should exercise effective leadership over their development policies and strategies, and coordinate development actions.

* *Alignment*: Donors should base their overall support on partner countries’ national development strategies, institutions, and procedures.

* *Harmonisation*: Donors’ actions should be more harmonised, transparent, and collectively effective.

* *Managing for results*: Resources should be managed and decision making improved for development results.

* *Mutual accountability*: Donors and partners should be accountable for development results.

⁷⁹ The Principles and Good Practices of Humanitarian Donorship of June 2003 also require humanitarian assistance to “strengthen the capacity of affected countries and local communities to prevent, prepare for, mitigate and respond to humanitarian crises, with the goal of ensuring that governments and local communities are better able to meet their responsibilities and co-ordinate effectively with humanitarian partners”.

⁸⁰ See <http://www.oecd.org/dataoecd/11/41/34428351.pdf>.

The cluster system is the mechanism for coordinating the humanitarian activities of agencies working in crisis or emergency conditions, and for managing humanitarian appeals to provide the rapid funding needed for quick, effective responses. The cluster system was introduced in 2005 as part of the humanitarian reform agenda, in order to strengthen overall humanitarian response capacity, predictability, accountability, and partnership between UN and non-UN structures. In keeping with the Paris Declaration, the cluster system is meant to support (rather than substitute for) government efforts to prevent disasters, and to help governments to effectively respond when disasters occur. There are eleven global clusters, each of which has a designated lead, responsible either to the emergency relief coordinator (globally) or to the humanitarian coordinator (nationally).⁸¹

These principles and mechanisms are widely used within the international development community, and can bring excellent results. However, the circumstances presented by Tajikistan's compound crisis—particularly its complex mixture of chronic development and acute humanitarian challenges, manifesting themselves in a combination of water, energy, and food insecurity in which the dominant response must come from actors (e.g., the World Bank) that are not formally part of the UN's humanitarian response structures—present the international community with some unusual challenges.

Tajikistan: The winter crisis and the February/May 2008 flash appeal⁸²

In trying to organise the response to the 2008 winter emergency, the international community first had to understand the nature, scope and severity of the compound crisis. Since cold weather is normal in winter, and a “normal” winter in Tajikistan usually brings with it power cuts and other difficulties (albeit mostly in rural areas), it was hard to clearly define what was “too much cold for too long”. Developing a consensus about the nature of the crisis took time and energy, both within the international community and with the government. Most organisations were not prepared for such a crisis: staff were not trained in humanitarian response tools; and those early warning systems that were in place were unable to capture indicators of the impending compound crisis. The Rapid Emergency Assessment and Coordination Team (REACT),⁸³ which had been established in 2001 to promote sharing of information, logistics and other resources between the organisations active in the disaster management sector, quickly emerged as a key institution for managing the response. Some 50 state, national, and international organisations and entities meet regularly under the REACT umbrella to coordinate their disaster management work. During emergency situations REACT partners work in sectoral groups, coordinating response and assistance. However, despite its work over the years, the REACT mechanism has not been officially endorsed by the Tajikistani government.

REACT members (organised in sectors) were requested to prepare a flash appeal—the main UN instrument for drawing international attention to and mobilising resources to respond to an emergency situation. The flash appeal describes the situation and its humanitarian consequences, and requests support for a number of relief interventions. The preparation of the flash appeal (as

⁸¹ For more information see <http://www.reliefweb.int/humanitarianreform/>.

⁸² This section draws largely from the “2008 Tajikistan Compound Crisis – Lessons Learned (Revision 2)” prepared by C. Kelly, DRMP Consultant to UNDP-Tajikistan in July 2008.

⁸³ The REACT Secretariat in Tajikistan is hosted by UNDP under the Disaster Management Programme. REACT's work reflects the rationale that, even though humanitarian assistance was gradually being scaled down in favour of long-term development assistance in Tajikistan, natural disasters remain a recurrent problem. It was created with the support of OCHA with the withdrawal of its in-country presence in 2004.

with other UN humanitarian appeals) is supported by OCHA, which has established the basic requirements that need to be met by the appeal. The first of these is a rapid assessment of the emergency. Unfortunately, the government's reluctance to declare an emergency, the small size of the UN presence in Tajikistan and of the OCHA office in Almaty (with two permanent staff), the small number of staff trained in humanitarian response in Dushanbe, and the conceptual problems posed by the unusual nature of the winter crisis—these factors conspired to prevent the release of the flash appeal until mid-February, when the cold wave was nearly over.

Once established in February, the clusters set to work to finalise the preparation of the appeal and prepare the immediate response. The food security cluster was effective in producing the FAO/UNICEF/WFP food security-livelihoods assessment (in April-May 2008), which significantly advanced our understanding of the compound crisis in Tajikistan. Important support was provided by the OCHA regional office in Almaty, particularly in terms of leading the development of the flash appeal and supporting the deployment of additional short-term OCHA staff to Dushanbe. However, much of the support provided by the small regional OCHA office took the form of 90-day secondments;⁸⁴ not all of the seconded individuals had the right skills (e.g., Russian language ability). There was also considerable turnover in short-term emergency program staff;⁸⁵ incoming staff had to be briefed about REACT and disaster management procedures in Tajikistan. This was not always effective and at times led to the duplication of REACT activities by the clusters.

The experience of winter 2008 shows that a relatively small UN programme, such as the one that can be found in Tajikistan, will face difficulties in sustaining a multi-month, multi-sectoral disaster response without significant staffing-up. Staffing-up requires rapid access to additional funding and human resources; ideally, surge capacity should be deployed to bring at least one (or more, depending on the workload) emergency staff member per cluster for at least a three-month period. Additional support is also needed in the resident coordinator's office, ideally in the form of more experienced international staff. Without such measures, the experience of the 2008 winter crisis shows that the UN humanitarian response mechanisms may be unable to respond to another compound crisis.

One year after the start of Tajikistan's winter crisis, however, it is still unclear where and how this funding should be secured. Funding for emergency humanitarian needs under this flash appeal was also sought from the Central Emergency Response Fund (CERF).⁸⁶ However, despite its *raison d'être* as a rapid funding release mechanism, the CERF did not provide immediate funding to support scaling up during Tajikistan's 2008 winter crisis. This was due in part to bureaucratic factors: the differences between Tajikistan's winter emergency and the more "standard"

⁸⁴ Funding was provided by DFID.

⁸⁵ For example the shelter cluster had eight persons come in and out in seven weeks; WASH/UNICEF had three persons come in and leave during eight weeks.

⁸⁶ The Central Emergency Response Fund (CERF) is a stand-by fund established by the United Nations to enable more timely and reliable humanitarian assistance to those affected by natural disasters and armed conflicts. CERF is funded by voluntary contributions from governments and private sectors organisations, individuals, and NGOs. The Fund is managed, on behalf of the United Nations Secretary-General, by the Emergency Relief Coordinator (ERC), the Head of the Office for the Coordination of Humanitarian Affairs (OCHA). CERF is intended to complement (not to substitute) existing humanitarian funding mechanisms such as the UN Consolidated Appeals. CERF provides seed funds to jump-start critical operations and fund life-saving programmes not yet covered by other donors. The CERF was approved by consensus by the United Nations General Assembly on 15 December 2005, in order to achieve the following objectives: (a) promote early action and response to reduce loss of life; (b) enhance response to time-critical requirements; and (c) strengthen core elements of humanitarian response in underfunded crises. More information is available at <http://ochaonline.un.org/cerf/CERFHome/tabid/1705/language/fr-FR/Default.aspx>

humanitarian crises required a certain degree of “outside-the-box” thinking, which was not always forthcoming.

The Tajikistan flash appeal, which was released 18 February 2008, sought \$26 million to provide assistance for a six month period. The donors’ response was relatively positive; some 57% of the requested funding was received, and significant resources were provided by donors outside the flash appeal. Non-traditional donors such as Saudi Arabia, Kazakhstan, the Russian Federation and South Korea provided significant amounts of assistance directly to the government of Tajikistan.⁸⁷ More traditional donors such as the US⁸⁸ and the UK but also Switzerland and the European Commission provided some \$21 million in humanitarian assistance outside the appeal, either directly to the government or via NGOs. The appeal fulfilled its function of raising awareness among the international community about Tajikistan’s crisis and mobilising resources for the humanitarian response. Still, some sectors remained underfunded, particularly in the water and sanitation, health, education and shelter areas.

The appeal challenged some established assumptions and perceptions. For example, urban areas—which in the past had generally been considered to be relatively privileged⁸⁹—were particularly hard hit by the cold wave. The appeal therefore focused extensively on these areas. Requests for assistance for urban areas, however, met with reserve from donors; considerable energy was required in making a case for this support. Little donor support was forthcoming for contingencies or preparedness work, despite the recurrent nature of natural disasters⁹⁰ that require repeated inflows of costly relief assistance. The vast majority of the funding (within and outside the appeal) went for relief items (food or non-food); very little went to interventions strengthening the preparedness and response capacities in case of future crises. Greater donor support for early recovery work could therefore be a quite cost effective, in terms of reducing post-crisis needs for costly relief assistance.

Neither the clusters nor the REACT sectors included the World Bank, which played an extremely important role in responding to the compound crisis—particularly in its all-important energy dimension. In addition to funding emergency response and recovery projects in the energy⁹¹ and food security⁹² areas (worth \$6.5 and \$5 million, respectively), the Bank also supported the design of the government’s emergency action plan for the energy crisis, and subsequently the government’s winter preparedness plan. However, the absence of a formal connection between the World Bank and the humanitarian community (working within the cluster system) further

⁸⁷ Saudi Arabia provided 10,500 kilograms (\$10 million) in in-kind donations of such relief goods as blankets, carpets and food. Kazakhstan provided \$1.5 million in in-kind assistance (diesel, mazut, wheat), while the Swiss Confederation provided \$1.115 million for six mobile hospitals. The Russian Federation donated 16 mini diesel power stations and 168 heating devises, valued at \$900,000. (Source: <http://www.reliefweb.int/fts>)

⁸⁸ According to OCHA, the US government has provided \$6.2 million in in-kind assistance to the government and NGOs. (Source: <http://www.reliefweb.int/fts>)

⁸⁹ For a visual presentation of the urban – rural poverty patterns, see the Socio-Economic Atlas of Tajikistan 2005 available at www.stat.tj/atlas/index.html. The Atlas is based on data from 2000 Census of Tajikistan and the 2003 Tajikistan Living Standards Survey (TLSS).

⁹⁰ According to the 2004-2009 UNDAF, up to 200 natural disasters occur annually in Tajikistan.

⁹¹ The grant-funded Energy Emergency Recovery Assistance Project supports the government’s Energy Emergency Mitigation Action Plan (EEMAP), which was developed with the assistance of UNDP and the World Bank in early 2008. The project covers part of the costs of rehabilitating Tajikistan’s electricity, gas and heat systems, and of procuring low sulphur mazut for the Dushanbe Combined Heat and Power plant.

⁹² The grant-funded food security project focuses on the procurement and distribution (by October 2008) of high quality seeds for winter wheat (1,300 tons) and fertilizers (1,500 tons), targeting 28,000 severely food insecure families. A second component supports vaccinations and other support for livestock (7,000 families).

fragmented the international community's response and exacerbated the coordination problems between the government and the humanitarian community. Two parallel, only partly coordinated humanitarian response systems were therefore at work during the compound crisis. This underscores the importance of the *ex ante* design of clear understandings between the humanitarian community, the World Bank, and the government as to who will do what in an emergency, before the emergency occurs.

The flash appeal of February 2008 for Tajikistan was revised in May, and was followed by a food security appeal that was launched in September. In addition to providing food (or cash) to the food insecure, this appeal seeks to provide beneficiaries with the means to produce their own food. In this way, it tries to look beyond the immediate humanitarian dimension of food insecurity in Tajikistan. However, without linking the appeal more directly to the structural cause of food insecurity—poor access to water and credit, the small assets belonging to the poorest farm households, the absence of appropriate rural development infrastructure, continued administrative restrictions on and monopolistic controls over markets for farm products and inputs—the appeal risks providing a humanitarian response to what is at bottom a set of unresolved development challenges. As these challenges have often pushed vulnerable people beyond their coping mechanisms and put them in need of humanitarian assistance in the past, they may be expected to do so in the future.

Although the strategy of the food security appeal is clear, and although it is understood that the main cause of food insecurity is affordability and not availability, the cluster did not assess whether the provision of conditional or unconditional cash benefits to severely food insecure persons would be preferred to the distribution of food to 800,000 vulnerable individuals persons. During the response to the winter 2008 cold wave, cash distributions were relatively quick and easy to implement, and helped ensure early recovery. Cash transfers could therefore be a preferred (flexible, low transactions cost) mechanism for providing assistance to particularly vulnerable families—particularly if it allows these households to accumulate farm stock and other assets.⁹³

In contrast to the situation with the flash appeal, funding for the food security appeal has been more modest; only \$9 million (mostly from USAID and CERF) of the identified \$34 million in needs have been funded.⁹⁴ Scepticism about the need for such a large food distribution component, and the lack of an impact assessment of the flash appeal (and its revision) may be limiting the food security appeal's effectiveness. If circumstances do not change, however, these low funding levels could severely limit assistance to the most food insecure families in Tajikistan. Further engagement with donors may be needed to rectify the situation.

Tajikistan: Lessons learned

The government, mostly with the support of non-traditional donors and the World Bank, has taken steps to improve the provision of energy, especially in urban areas. Official preparations for the coming winter have mostly focused on energy and partly on the food security sectors. With World Bank support, the government's Energy Emergency Mitigation Action Plan (EEMAP) has focused on accumulating fuels stocks and repairing and upgrading energy infrastructure. Energy imports (some actual, some promised) have been procured. In the food security area, the government has provided wheat seeds to farmers—albeit with uncertain coordination with the

⁹³ Evaluation of DFID Support to the Energy and Basic Services Crisis in Tajikistan Winter 2008 (draft, October 2008).

⁹⁴ Information from the Summary Note of the Central Asia Task Force Meeting of 21.10.2008.

humanitarian community in Tajikistan. While problems are likely to occur this winter, these could reflect Tajikistan's chronic development challenges, particularly in terms of natural disasters.

On the UN side, a UN Emergency Reserve for Tajikistan has been formed, on the basis of the stocks donated from UN organisations. Mechanisms for the procurement and delivery of non-food items have been worked out, and awareness of humanitarian procedures and mechanisms has increased. Despite bureaucratic obstacles, UNICEF was able to quickly distribute its in-country stock of emergency non-food items to children's institutions (boarding schools, orphanages, juvenile centres, etc.) via the respective line ministries. Although limited in quantity and coverage, the early distribution of these supplies helped eased the sufferings of children in institutions during the severe cold. In the event of future emergencies, the more rapid dedication of resources to those activities (like UNICEF's—as well as NGO activities⁹⁵) that are able to make a difference could be pursued. In many respects, the difficulties that emerged during the 2008 winter crisis can be seen as the inevitable consequences of an understaffed UN presence working in a remote, isolated country without sufficient humanitarian/disaster management expertise, in a non-standard crisis situation requiring the UN emergency response/humanitarian machinery to think “outside the box” to quickly and effectively design and implement different solutions.

Strategic policy documents: Prospects for finding the right balance between humanitarian, early recovery, and development programming, and for improving coordination within the international community, depend in part on the links between the strategic planning documents guiding the work of the government, donor community, and United Nations in Tajikistan. Strategic planning cycles in Tajikistan—in the form of the PRS for the government, the JCSS for the international community, and the UNDAF for the UN system—come to an end in 2009. This creates opportunities for developing more holistic responses to short-term humanitarian and longer-term development challenges facing Tajikistan.

Coordinating donors and government priorities and activities for aid effectiveness is often difficult, even in “normal” (i.e., non-emergency) circumstances. Despite efforts to increase aid effectiveness under the Paris Declaration, differing donor priorities, governance structures, and systems for project cycle management, accounting, and reporting; persisting incentives to publicise national donor activities, in order to justify development assistance budgets to sometimes sceptical publics; the persistence of tied aid; different approaches to managing trade-offs between national ownership donor accountability; the growing fragmentation of the donor space (as the relative position of OECD-DAC donors declines)—these comprise what might be described as the global constraints on aid effectiveness. In Tajikistan, a recent workshop on preparing the new JCSS identified the following as key issues:

- Budget, public investment and aid processes are unconnected, and monitoring and evaluation is incomplete;
- Current fiduciary and macroeconomic conditions do not allow aid to flow through the budget;
- Much aid remains supply driven; the alignment of donor and government priorities is often limited;
- Aid volatility and unpredictability are significant;

⁹⁵ Oxfam, Mercy Corps, and Mission East, for example.

- Aid coordination processes are fragmented and donor driven;
- Growing donor fragmentation is exacerbating already serious coordination challenges and costs for the government; and
- Joint donor operational modalities—sector-wide approaches (SWAs), joint project implementation units, joint missions—are not used sufficiently, and represent missed opportunities.

In light of these constraints, how can the different strategic, operational and funding frameworks associated with the PRS, JCSS, and UNDAF be better aligned, in order to provide a more holistic response to the humanitarian and development programming challenges facing Tajikistan?

While water, energy, and food insecurities can flare into humanitarian crises, they reflect long-term chronic development challenges. Because of the nascence of the Republic of Tajikistan as a state, and because many of Tajikistan's institutional and socio-economic problems are closely linked to the Soviet inheritance, some of these chronic development challenges are linked to problems of systemic transition. These are particularly apparent, for example, in the problems of renewing the decapitalised industrial, agricultural, and water infrastructures inherited from the Soviet period, the difficult business and investment climates that limit investment into these sectors, the uncertainties surrounding the private ownership and management of land, and difficulties in distributing responsibilities and resources among various levels of government.

While Tajikistan's strategic planning documents mention these issues, their connections to the water, energy, and food insecurities that underpin the compound crisis, and the links among these insecurities, are not always made. As a result, the prioritisation and sequencing of activities across these sectors is not as strong as it could be. In the energy sector, for example, much attention is focused on large electricity generation projects like the Rogun hydropower station. However, such projects can not be easily financed, and generate controversies which can divert attention from less capital-intensive efforts to accelerate the construction of small hydropower plants, expand the use of biofuels and solar power technologies, reduce losses in electricity generation, transmission, and distribution, or encourage the construction of more energy efficient residential and commercial buildings. Restructuring state monopolies like Barqi Tojik and TojikGas, in order to improve management and attract new investments in the energy sector, is a *sine qua non* of progress in these areas. Such measures would meet with broad support from the international community, which could also provide the technical assistance and relatively small amounts of donor funding needed to realise them. The design of the new PRS, JCSS, and UNDAF should therefore focus on ensuring:

- the consistent treatment of these issues across the strategic planning documents;
- that the appropriate linkages to national policy instruments (e.g., budgets, sectoral reform strategies) are in place;
- that financing gaps are appropriately identified; and
- appropriate and coordinated funds and technical assistance from the donor community will be forthcoming.

Tajikistan is a natural disaster prone country with recurrent risks of floods, mudflows, landslides and earthquakes. Natural disaster risk reduction, preparedness, and management should therefore be mainstreamed across the strategic programming documents. Institutionally, the government should consider:

- restoring the Committee on Emergency Situations' ministerial status;
- endorsing REACT as the main interface with the humanitarian community for coordination of disaster risk reduction, response and recovery; and
- providing greater attention to those regions that are particularly exposed to natural disasters, both in terms of increasing response preparedness and reducing vulnerability.

The importance of strengthening collaborative platforms like REACT, where representatives of different government agencies and donor organisations work together on these issues, is difficult to exaggerate.

The above has some important institutional implications for the international community, within the context of the JCSS formulation process. In particular:

- The thematic priorities around which the UN humanitarian cluster system is organised—food security, water and sanitation, health, shelter, logistics—should be reflected in the UNDAF/JCSS pillars.
- Wherever possible and advisable, a regional approach should be taken to water, energy, and food security issues.
- Efforts by the international community to sustain a long-term, consistent, effective assistance presence in Tajikistan have not been fully successful. Tajikistan as a programme country does not always receive the attention it should, particularly in terms of understanding among donors of the nature of Tajikistan's development challenges, consistency of aid flows, and willingness to undertake donor harmonisation and coordination activities.⁹⁶
- Sectoral, thematic, or cluster coordination mechanisms and working groups should bring together actors from both the humanitarian and development communities. It is encouraging that the preparation of the new JCSS is based in part on the joint (government/donor) development of SWAs in health and education. This approach should be extended to water, energy, and food security.
- Development agencies active in Central Asia should increase their human resources and other capacities to engage in disaster prevention programming, either on a permanent or surge capacity basis. Water and sanitation expertise is particularly lacking in the region. UNDP's decision to create a regional office for Central Asia in Almaty (thereby joining the World Bank, USAID, the European Commission, and other UN agencies) and to outpost staff from its Bureau of Crisis Prevention and Recovery there, should where possible be followed by other organisations.

Within the context of the UNDAF and related humanitarian and early recovery processes, the following implications would seem particularly important:

⁹⁶ This applies to non-traditional as well as traditional donors.

- The UNCT in Tajikistan is too small to support the type of presence needed to effectively respond to compound crisis phenomena by better integrating humanitarian and development activities. While 15 UN agencies are active in Tajikistan, only five have in-country representations, and only two of these engage extensively in programming in rural areas. Most UN agencies therefore do not have the capacity to fully realise both the humanitarian and development dimensions of their mandates, or to quickly scale up in the event of a humanitarian crisis. In this context, it is encouraging that FAO will start from 2009 to implement longer-term assistance in the agricultural sector and will not only be represented by emergency programmes. A more sustained “boots-on-the-ground” UN commitment to Central Asia, and to Tajikistan in particular, is needed.
- Responses to crisis vulnerabilities within the UN country team in Tajikistan have mostly been agency-specific; efforts to create the UNCT operational and funding frameworks needed for effective joint programming have not been fully successful.⁹⁷ Wherever possible and advisable, common inter-agency targets should be developed to address critical areas of longer-term vulnerability, particularly in the water, energy, and food security areas.
- Humanitarian and development assistance activities by and large continue to operate on different planning cycles, funding, and timing. Procedures for CERF funding for compound crises—as these are not classical humanitarian crises—need to be clarified and made more efficient. There is also a need for identifying the appropriate intra-UN mechanisms and funding sources to finance the rapid “scaling up” needed to respond to the emergency. The 2008 winter crisis showed that although UNDP is very much involved in natural disasters management and response (through the DRMP), its financial procedures are not yet fully adapted to rapid response needs in emergency situations.

Kyrgyz Republic: The flash appeal

The low water levels at Toktogul, the “electric shock” of rolling black-outs and stagnant or declining industrial production (outside of the Kumtor gold production complex), growing food insecurity, and the Kyrgyzstani economy’s possibly greater (than Tajikistan’s) vulnerability to the effects of the global economic crisis⁹⁸—these factors do not bode well for the Kyrgyz Republic this winter. As a result, the international community started to develop potential response plans in mid-2008. On 6 August 2008, the government requested UN assistance with the coordination of donor actions to avert potential winter difficulties.

As in Tajikistan, the primary focus has been on the energy sector; the World Bank has played a key role in providing an \$11 million grant to finance emergency repairs at, and provide fuel for, the Bishkek and Osh thermal heating plants. However, the response to a potential compound crisis has been led by the United Nations, especially the resident coordinator’s office (with support from OCHA’s regional office in Almaty), in the form of the flash appeal issued in December (with the approbation of the President and the government).

⁹⁷ Humanitarian Futures Programme Report, August 2008, page 11.

⁹⁸ Although remittances (mostly from Russia) comprise a larger share of GDP in Tajikistan than in the Kyrgyz Republic, in terms of the share of exports going to Russia and Kazakhstan, and financing provided by Russian and Kazakhstani banks, the Kyrgyz Republic is more vulnerable than Tajikistan.

In order to coordinate the sectoral responses, on 4 September the UN together with the government, donors, and implementing agencies activated four sectors of the Disaster Response Coordination Unit⁹⁹ to develop sectoral plans to prepare for the winter (health; water and sanitation; child protection and education; and shelter). Following the rapid household food security assessment conducted in mid-October, a food security group was also activated. While this procedure corresponds to the mobilisation of the clusters as occurred in Tajikistan during the winter of 2008, it does not yet have the same formal consequences (e.g.. being able to draw on additional emergency staff from OCHA and the global cluster leads). The clusters would be formally mobilised in the event of a severe winter (or other) emergency.

The flash appeal seeks some \$20 million to “help seven United Nations agencies and three NGOs support the Government of Kyrgyzstan in addressing the needs of the 800,000 most vulnerable people, as well as to undertake preparedness measures to ensure continuation of essential services”.¹⁰⁰ The appeal, which runs from December 2008 through May 2009, adopts a sectoral focus to address the vulnerabilities of specific groups and regions that would be particularly affected by a harsh winter.

The flash appeal explicitly refers to the water, energy, and food insecurities, and seeks to clearly link short-, medium-, and longer-term interventions. In underlining the vulnerability of specific groups and regions, the appeal recognises that the origins of the crisis are structural, even though such external factors as climatic events or the global economic crisis can affect the most vulnerable and put them in need of short-term assistance. Specific objectives include the following:

In the *health* sector:

- Ensure the provision of electricity, heat and water supply for key health facilities;
- Reduce avoidable crisis-related morbidity and mortality at the community level; and
- Ensure effective health information and disease surveillance system management of crisis-related morbidity and mortality trends.

In the *water, sanitation, and hygiene* sector:

- Ensure that urban populations have access to adequate supplies of safe drinking water, sanitation, and hygiene services during energy and winter crises;
- Reduce the risks of outbreaks of water-borne diseases in major urban areas; and
- Ensure that key social care facilities have access to safe water and sanitation services.

In providing *shelter*:

- Ensure that warm, safe accommodations are available over the winter period for 2800 homeless people in urban areas;

⁹⁹ The DRCU was set up as part of the Inter-Ministerial Commission for Disasters. It is made up of UN agencies, donor organisations, the Red Cross Movement, and international and national NGOs, with the aim of maintaining a unified policy and strategy in disaster response and decision making in humanitarian actions.

¹⁰⁰ Kyrgyzstan Flash appeal, 27 October 2008, Bishkek.

- Ensure that the heating, nutritional and other basic needs of people living in institutional settings (including 2000 in residential homes for the elderly and disabled, and 6300 in places of detention) are met;
- Ensure that 23,700 families (150,000 people) who live in extreme remote areas have access to basic supplies and services;
- Support the 1,200 families (7,500 people) that lost their homes as a result of earthquakes in Papan and Nura villages in Osh province in October;
- Ensure that the needs of 36,000 single elderly households in urban and rural areas are looked after through peer outreach; and
- Ensure that the number of extremely vulnerable households (e.g., female- or grandparent-headed households with large dependency ratios) and their needs are accurately mapped.

Box 3: Reports and assessments supporting the Kyrgyz Republic's flash appeal¹⁰¹

* *WFP Assessment of Food Markets*: Carried out in summer 2008; available.

* *WFP Rapid Food Security Assessment based on National Statistical Committee figures*: Carried out in October 2008; available.

* *WFP Rapid Food Security Assessment of New Suburbs of Bishkek*: Carried out in October 2008; available.

* *OHCHR Assessment of the Rights and Situation of Homeless People*: Undergoing finalisation.

* *ACTED Rapid Assessment of Food Security in Three Southern Oblasts*, based on beneficiary surveys.

* *UNICEF Rapid Assessment of Water and Sanitation in Bishkek*: Carried out August-September 2008; available in English and Russian.

* *ACTED Rapid Assessment on Water and Sanitation in Osh*: Completed in October 2008

* *USAID Rapid Assessment of Humanitarian Needs of Residential Institutions for Children, the Elderly and the Disabled*.

* *UNICEF Rapid Assessment of Institutional Heating, Nutritional, Energy and Water/Sanitation Needs and Capacities of Eight special Institutions*: Completed in October 2008.

* *UNICEF Rapid Assessment of Other Institutions for Children and on the Needs of Street Children*: Completed in October 2008.

Donor activities in the agricultural sector include grants of \$1 million and \$170,000 from the World Bank¹⁰² and UNICEF,¹⁰³ respectively, to support the government's nutrition programme.

¹⁰¹ As of mid-November 2008.

¹⁰² The project seeks to: (a) provide subsidised fortified flour for 300,000 poor families; (b) train health staff and village health committees in nutrition; (c) raise public awareness and disseminate food security information; and (d) provide additional vitamin A supplementation.

USAID has purchased 280 metric tons of winter wheat seeds (for \$300,000), and plans the subsidised distribution of livestock feed (\$700,000) during January-February. Funds from the World Bank (\$4 million), Islamic Development Bank (\$750,000), and FAO (\$450,000) have been raised to purchase some additional 120,000 tons of wheat to augment the strategic grain reserves. The European Commission is currently preparing a 30 million euro programme targeting the agriculture sector to be financed by a special facility,¹⁰⁴ although the allocation of funds under the facility is not yet known.

Box 4: Current JCSS objectives and crisis management

- *Economic management consistent with strong and sustained pro-poor growth (goal 1)*
- *Financial rehabilitation, and a balanced and comprehensive development of the energy sector (goal 1.1)*
- *A better transport infrastructure that provides access to local and regional markets (goal 1.2)*
- *Increase productivity in agriculture, and strengthen market mechanisms in production and processing (goal 1.4)*
- *Ensuring access to and improving the quality of basic secondary education (goal 3.1)*
- *Ensuring access to and improving the quality of healthcare services (goal 3.2)*
- *Improving the effectiveness and efficiency of social assistance and pension schemes (goal 3.3)*
- *Ensuring the guaranteed provision of and access to key public services (goal 3.4)*
- *Environmental sustainability (goal 4)*

As these activities mostly address the supply side of the food security issue, they are unlikely to provide immediate relief to poor households that can not afford to buy food at current prices. Here “top-off” funding for the unified monthly benefit (UMB)¹⁰⁵ programme by the World Bank and European Commission, which is expected to increase the monthly payments scheme from \$3.50 to \$4.50, is a step in the right direction. However, only 25% of the poorest households actually receive the UMB. The flash appeal therefore calls for the distribution of rations of oil and wheat flour to vulnerable families. This is intended to help the most food insecure families to avoid malnutrition; the small rations and targeting seek to avoid depressing local food prices (thereby damaging the welfare of poor farmers).

¹⁰³ The project supports social marketing of home-based food fortification, and improving infant and young child feeding practices nationally.

¹⁰⁴ A special 1 billion euro facility has been set up to help strengthen short- and medium-term supply responses by farmers in developing countries in response to higher global food prices.

¹⁰⁵ This programme currently supports approximately 25% of households below the poverty line.

Important support for the development of the flash appeal came from OCHA's regional office in Almaty; this was complemented by the recruitment of a consultant in Bishkek to support the Disaster Response Coordination Unit in the UN resident coordinator's office. This external support and internal capacity needs to continue to underpin the realisation of the flash appeal, particularly in terms of advocacy, communication, and monitoring. OCHA has also played an important role in transferring lessons learned from Tajikistan to the Kyrgyz Republic during the design of the flash appeal. The UN in the Kyrgyz Republic could likewise benefit from a more structured exchange of experiences with the humanitarian community in Tajikistan, and especially with REACT and the UNDP Disaster Risk Management Project. Pre-crisis training (including for senior-management) in the cluster system would strengthen response capacities in case of crisis.

Strategic policy documents: Prospects for finding the best alignment of humanitarian, early recovery, and development programming, and for improving coordination among the various elements of the international community, depend in part on the links between the strategic planning documents guiding the work of the government, donor community, and United Nations in the Kyrgyz Republic. The flash appeal correctly focuses on the potential humanitarian needs of vulnerable groups during the coming winter, and on ensuring that critical public institutions remain functional in a worst-case scenario—while linking these issues to medium- and long-term activities to resolve the underlying structural problems in the water, energy, agricultural, and other sectors. The Kyrgyz Republic's new 2009-2011 Country Development Strategy (CDS) presents an excellent opportunity to strengthen these links.

The CDS identifies priority activities in the energy and agricultural sectors; rapid implementation of these measures (and/or provision of additional resources) could significantly reduce water, energy, and food insecurity, if not in this winter then certainly in the next one. In the energy sector, focus should be given to measures to accelerate the introduction of metering, reduce losses, and develop alternative energy sources (small hydropower, solar, biomass). Food security, water management, education, and private sector development are all areas in which appropriate programming links and policy reforms would help reduce crisis risks.

Following on from the flash appeal, further capacity needs to be built in the UN resident coordinator's office in Kyrgyzstan, particularly to implement early recovery initiatives. An early recovery team could begin to implement some smaller-scale development projects, such as micro-hydro power plants, that would go some way to address the immediate energy crisis and meet some of the country's CDS goals.